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IN THIS ISSUE:

- Preparedness in Our Time
- U. S. Business Goes Foreign
- War and Peace and the Problem of Berlin
- Cultures That Do Not Meet
- Automation Invades the Southwest
- Need New System for Distributing Wealth
- Those Days Are Gone

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25 CENTS

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Those Days Are Gone

"Backward, Oh backward, turn time in thy flight," is a refrain echoed by many who are being overwhelmed by the march of events. We ought to go back to the ways they did things in the old days. Few of those who parrot these words know or remember what those old days were like, and if they were to be thrown back in time with their knowledge of present times intact they wouldn't be able to get back to the present times soon enough.

You don't have to go so far back. People now living, if they put their minds to it, can recall the days when conveniences which we now take for granted did not exist. Let's examine a few.

Take communications. As late as the beginning of this century, if you lived on one side of this continent and wanted to send a letter to someone on the other side, it took from ten days to two weeks for it to arrive. True, there was the telegraph, but the receipt of a telegram was usually the herald of bad news. The larger cities were beginning to use the telephone, though many people considered it an expensive luxury.

Or consider illumination. In the largest cities, gas was the accepted method of street lighting, when there was any at all. In the larger cities electric arc lights sputtered and hissed. In the home the accepted light was the kerosene lamp; the daily chore of keeping the wicks trimmed and the chimneys clean and the fonts filled occupied someone's time for an hour or so.

Every facet of our home life has changed. Monday is no longer washday, Tuesday ironing, Wednesday mending, Thursday and Friday, cleaning, Saturday, baking and bath night, and thanks-be-to-Sunday when theoretically you could rest if some friends didn't drop in for a Sunday dinner. And you want to go back to that?

How did you make your living? On the farm, the shovel, hoe and pitchfork were basic tools and every one of them required human muscle for backbreaking toil. The field cultivating was accomplished with horse-drawn plow and cultivator. Harvesting, haying, woodcutting, milking, stock care and all kindred operations required hard manual labor, assisted where possible by animal power. Trips to town for other necessities were occasional affairs, over roads which were muddy, unpaved and endless. Visiting friends and neighbors either walked or came horseback. Entertainments were few and most news was word of mouth. Surely you don't want to go back to that?

In the trades, carpenters had all their own tools and every one was hand operated—the hammer, axe, handsaw, adze, chisels and planes. Hours were generally from seven in the morning to six at night. Pay was negotiated on every job. Factories were much the same as prisons. Work was monotonous machine tending, or lifting and carting heavy materials for long hours and scant pay. You truly earned your bread in the sweat of your brow. Children worked, too. Coffee breaks were unheard of. Apprenticeships were long and miserably paid. Education was for the well-to-do and foreign travel a dream. Are you wishing for the old ways? Or are you trying to adjust to the changing scene? Hadn't you better

(Concluded on Page 26)

December, 1961

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Whole No. 200

'Preparedness' in Our Time

Billboards across the country show a picture of President John Fitzgerald Kennedy and the caption reads, 'The Fight for Peace is a Lonely Fight.' There is an implication that the head of the present political administration of the United States is an active participant in this 'lonely fight.' But a casual perusal of his utterances and actions leaves one ample reasons to doubt the steadfastness, the courage, and the sincerity of his fight for peace.

Perhaps the discrepancy lies in the definition of peace as understood by the President and by humanity at large. Ex-president Eisenhower was a little more revealing in his statements on peace, albeit still in a heavily disguised way. At least, he did not come right out and advocate peace as such; he always modified it as 'peace with freedom and justice.' In the context of other statements and his actions, this modified peace could easily be interpreted as meaning the kind of 'peace' that would prevail only after the Reds were wiped from the face of the earth with atomic bombs.

Politicians are notorious for ambiguity and misdirection in their utterances. 'Campaign oratory,' particularly, can be heavily discounted—say, about ninety per cent. The political history of the United States is replete with broken promises. If a politician promises, by word or implication, to do one thing, the probability (based on the record of averages) is better than fifty-fifty that he will do the opposite. For example, when a political candidate promises to lower taxes if elected, you can take it for granted that taxes will be increased under his administration. Politicians are much more adroit at finding excuses for breaking their promises than they are at making good on them.

Although President Kennedy has strongly hinted in certain statements that his primary objective is peace, other statements and certain actions authorized by his administration are enough to throw serious doubt on his integrity in that area. The United States continues feverishly to prepare for war and continues in the provocation of incidents that could escalate into war.

Many factors that, historically, have tended to promote warfare are now at work in our society, some of them in a highly aggravated form. Our social administrators are unprepared to cope with them in any way other than the conventional way; that is, wait until they become critical then react in a hysterical manner.

Let us enumerate some of the pressures that are pushing us toward World War III:

One pressure is the population explosion in the world. This is highly dangerous to peace and human welfare; yet, no governmental administration is preparing to take effective action against it. There is almost placid acceptance of the probability that the human population will double — reach a total of six *billion* — by Year 2000. No one foresees any way (barring world catastrophe, such as World War III) of holding the population under four billion for 1980. Many lands are already saturated with population; some of them over-saturated for they cannot sustain the populations they now have except through heavy imports of supplies. In the absence of population control measures, the increases of over-saturated areas must spill over into less saturated regions. More often than not, these surplus people are not wanted or appreciated in the areas they invade; for example, the Puerto Rican invasion of the eastern United States.

However, there are influential interests which welcome the population explosion and which resist any idea or effort for its curtailment. Businessmen gloat over the new statistics on population. All they see are more customers for more products, hence more profits for business. Businessmen blind themselves to the side effects as they concentrate so avidly on this one point. The clergy

is not unhappy over the increase, for more people mean larger congregations and more souls to save; and, if the bigger increases happen to be among the members of their own sects, the clergymen are jubilant. They feverishly resist any proposals for the social adoption and administration of birth control measures. Neither do politicians resent the population increase. More people mean greater prestige for their respective districts as well as more votes and more taxes. For example, the politicians (along with the businessmen) of California eagerly await the imminent announcement that California has more people than New York State. Further, they are hopefully contemplating a state population of twenty million for the near future. Some of the more enthusiastic promoters even predict thirty million people for California, although they admit this would call for a drastic improvement in the state's water supply. Aside from the special interests, there are many anarchistic individuals who resent any suggestion for population control on sentimental or moralistic grounds.

Along with the population explosion is an industrial explosion. Many areas of the world which have remained in a backward condition for centuries now are seeking industrialization and modernization. The people are aspiring to something better for themselves than mere subsistence. This is creating serious social tensions which are manifested in various directions. One of the major problems associated with modernization is that of obtaining the essential resources for industrialization, among them energy resources. The resource deposits of the world, therefore, are becoming foci of national attention and greed. For example, the rich metal deposits of Katanga in Africa are at the bottom of the present trouble in the Congo. The United States, the world's most greedy consumer of natural wealth, has its finger in almost every rich resource deposit of the 'free world,' including the copper of Chile, the copper and uranium of Africa, the tungsten of Korea, the tin of Bolivia, the bauxite of the Guianas and Jamaica, the oil of Venezuela and Arabia, and the iron ore of numerous areas. The struggle for natural resources is reaching the stage of serious international disputation.

There is also a growing struggle for fresh wather, both as a source of the liquid itself and as a source of hydro-electric power. This struggle is leading to frictions between areas where water or water power is of crucial importance — between the United States and Canada, between India and Pakistan, between India and China, between Israel and Syria, between California and Arizona, between northern California and southern California.

Industrialization also upsets the trade balances of the world. Backward countries which once supplied raw materials to the industrial nations and took manufactured products in exchange now want to install their own industry and, perhaps, enter into export trade in competition with other industrial nations. Thus, as competition for raw materials is becoming more severe, one nation after another is curtailing the export of its raw materials, processing them internally instead.

As a nation industrializes, it tends to sell a large part of its production to its own people. Their way of life becomes more complex and their wants increase and diversify. Also, their income must be increased if they are to become customers for the new products. In other words, the standard of living is being elevated for millions of people who, before this time, had barely enough to survive. This trend places a further drain on resources and other supplies. A side effect of the higher wages is the installation of more automatic production, which in turn results in unemployment and dissatisfactions among the emergent peoples. South Korea, for example, has a very high unemployment rate and this is producing an internal crisis.

In the past, when internal crises developed in a nation, the situation could be relieved to some extent by sending large numbers of people to settle new lands — usually land which was sparsely occupied by primitive peoples — or emigrating them to less populated countries. No such opening is now available to most of the world's crowded areas. Russia, interior China, Canada, and certain parts of Africa and South America contain domains that could absorb more people, provided they were sufficiently subsidized and extensive preparations were made to receive them. On the whole, however, each area must from now on look forward to supporting its own increase in population and bringing its own people a better way of life. In the absence of feasible means of doing this, the social unrest of many areas can get only worse.

Twice within this century, Germany has sought 'living room' at the expense of other nations. Italy invaded Ethiopia for that purpose. And Japan invaded China. Certain Western nations, particularly those of Europe, are looking greedily

at the vast domains of the Soviet Union. The need for resources, land, and water is creating jealousies among nations and arousing thoughts of aggression.

It is no longer fashionable for one nation to hold another nation in colonial bondage, forcing it to furnish raw materials at very low cost while its population lives in extreme poverty and squalor. This practice in the past enabled Britain, France, Spain, Portugal, Belgium and (belatedly) Germany to rise to positions of glory and relative opulence in the world. But colonialism is now fading out, with Portugal the last stubborn holdout of the old colonial powers.

The world's two greatest modern powers, the United States and the Soviet Union, have had expansive domains for expansion within their own areas. Canada and Australia have been similarly blessed, but much of their vacant land has been more forbidding to pioneer settlement. These unsaturated areas are now being looked on with envy and greed by the people of over-crowded nations in many parts of the world.

No national strategist with any discernment at all would contemplate the invasion and taking over of such areas as India, coastal China, Japan, South Korea, eastern Mediterranean lands including Egypt, or any part of Western Europe. These are all deficit areas, not able to sustain their own populations much, if any, above a subsistence level. The big land and resource prizes of the world are North America and the Soviet Union. The United States has committed the supreme strategic blunder of taking under its wing some of the worst deficit areas of the earth, all of which have to be heavily subsidized.

Because the United States has the world's most wasteful and profligate economic system, and because it is subsidizing huge deficit populations abroad, it is presently consuming fully half of the world's mineral resources. Even this excessive proportion, however, is not enough to satisfy our greed under the Price System. We deplore the sight of other countries having access to any sizable resource deposit, and we try to horn in on it wherever we can. In collusion with Belgium, we are keeping Katanga from remaining an integral part of the Congo because of its rich ore deposits. In 1953, we made a special point of taking the world's largest tungsten mine away from North Korea. We are trying to worm our way into the French oil discoveries in North Africa. We are all excited about China's developing the resources of Tibet and about India's having the resources of Kashmir, two places on which we had our own eyes focused. In Iran, we forced the Russians out of the oil fields of the north after the war and later finagled the British out of a large share of their holdings.

American industrial economics anticipate the day when the United States will be taking upwards of 80 per cent of the world's essential resources, leaving only 20 per cent or less for the remaining 93 per cent of the earth's people. No racket can operate for long on that basis. The American greed for resources is a basic factor in the promotion of World War III. It is also a reason why the Soviets are so stubborn about mantaining their own defenses.

In the past, much profit was to be made from international commerce. That was when there were only a few major industrial nations and the great majority of the world's people were merely suppliers of raw materials. Raw materials could be bought cheaply and manufactured materials could be sold dearly. Now that all nations are seeking industrialization, the trend is toward greater self-sufficiency in each nation, hence a reduced purchase of manufactured products from other nations. (This principle does not apply fully to the period of most rapid industrial buildup when the backward nation is busily importing capital goods for its growing industry; but this condition is only temporary.)

The production of raw materials is becoming more diversified in each country and more of these materials are being processed at home. Consequently, foreign markets for the products of the major export nations are diminishing; and this is further exacerbated by more nations' seeking export markets for their own manufactured products. The competition is now becoming very severe. The United States is unfavorably affected by this trend, for its manufactured products are so high priced on world markets that they cannot compete with lower cost production in other countries. In fact, huge amounts of foreign goods are coming into the United States and under-selling domestic goods of similar quality. This competition for markets is adding to the rivalry and dissension among nations and blocs of nations.

Another factor in the building up of world tensions is religious rivalry. An important element of the Cold War between the United States and Russia is the thousand-year-old struggle between the Roman Catholic Church of the West

and the Orthodox Catholic Church of the East. Thus, the Cold War also becomes a holy war. The fact that the East is tolerant of both belief and disbelief in religious doctrines permits the West to exploit the issue of piety versus 'atheistic materialism' in its propaganda against the East. For some odd reason, the West is much more agitated over a free association of Orthodox Catholicism, atheism, Buddhism, Mohammedanism, etc., in the East than it ever was over the monolithic 'heresies' of Mohammedanism, Hinduism, Lamaism, Shintoism, and paganism in other areas. Religion, having been made a basic issue in the Cold War, completes the trinity of fundamental social issues — economic, political, ecclesiastical.

The objectives of the Cold War and of the anticipated Big War are not clear in the minds of most Americans. President Eisenhower's scholarly Commission on National Goals did nothing to clarify those objectives. Obfuscation of the real objectives is an essential feature of the war promotion conspiracy; otherwise, the people would not go along with it. On the other hand, our people are being vigorously indoctrinated with the proposition that our war preparations are solely for defense and that the Reds are the ones who are planning aggression and world conquest. That is the kind of Black-White propaganda that accompanies all schemes for aggression. However, it is necessary that certain objectives be kept in sight by the boys in the know.

An immediate objective of the Cold War in the United States is to create an 'economic climate' which favors large-scale debt creation and a huge military buildup. This is for the purpose of stimulating the economy at home and of providing a plausible explanation to the American people for huge handouts of their tax money to the Military, to Big Business, and to our deficit 'allies.' Such an economic climate requires that the people think that war is probable and imminent, also that they have a personal stake in the Cold War. To maintain this belief, it is necessary to create incidents around the world and to blame them on the 'enemy's' aggressive intentions. Our polemicists go overboard in their efforts to whoop up 'incidents.' How many times, for example, has an 'invasion' of Laos been created by our propaganda agencies just to make headlines?

On many occasions, we have taken an active part in imposing tyrannical political regimes on small areas, such as Batista in Cuba, Somoza in Nicaragua, Trujillo in the Dominican Republic, Jiminez in Venezuela, Diem in South Vietnam, Boun Oum in Loas, Rhee in South Korea, Menderes in Turkey, King Paul in Greece; then, when the people finally rise up in revolt against the excesses of that tyranny, we blame it on 'Red aggression against a free and peace-loving people.' The setup of West Berlin is one of the rawest examples of planned provocation that could be devised, and we have taken special pains to keep it irritated. We consistently refuse to sign a final peace treaty with Germany, obviously because that would tend to ease East-West tensions.

A situation as extensive and complex as the Cold War is too big of a proposition to fake or fix all around. Many of the participants, even some in high places, and most of the dupes in the lower echelons must believe that the Cold War is merely a prelude to the Big War which is being forced upon us. Hence, we, as the leader of the West, must behave as though the defeat and conquest of the Soviet Union and its associates is a national objective toward which we must prepare — to be implemented, of course, only after the Soviets provoke us into making the attack. The people of the West, therefore, are being fed the propaganda line that World War III is virtually inevitable; that the West is capable of defeating the East; and that, after the war, everybody will have 'peace with freedom and justice' — and presumably business-as-usual on the Western pattern.

One of the most difficult propaganda problems our side has is that of convincing the people — our allies more than our own people — that the West can surely win the war. The Russians are repeatedly demonstrating certain superiorities in technology, in construction, and in rocketry which cast doubts on our propaganda claims. They are also demonstrating that they have a research and development system that is far more efficient than our free enterprise system. So, all the time, our spokesmen are belaboring the point that the United States has superior striking power, as though the continuous repetition of a big lie will make it sound like the gospel truth.

The fearfulness of atomic warfare has been played up by various writers to the point where there is a widespread belief that it would wipe out all life on earth and that there would be no human survivors. It happens that most people prefer to remain alive, even if it means changing their politics. Hence, this kind of dissertation on the effects of atomic war has created a crisis in the propaganda of the West. To meet this threat,

the Vatican came up with the ultimate in negativism: it advanced the slogan, 'Better Dead Than Red.' Cardinal Spellman was one of the early advocates of this line, introducing it in France several yearsago. Now it is receiving extensive play in the United States by the fanatics of the extreme right.

Most Americans, however, are not converted to the idea that it is better to be dead than to go on living in the same world with the Russians. In order to get this majority to accept war, it is necessary, first of all, to brainwash them with the idea that they have a fair chance of survival in case of all-out war. So, now, there is considerable propaganda emphasis being placed on survival probabilities. This propaganda, at the present stage, is crude and unconvincing to the more intelligent people, but it seems adequate for the general citizenry which has long deen doped and numbed with commercial advertising. For one thing, the danger of fallout is being played down: the duration of its effect is being minimized. For another, the war will be over in a few days. Hence, if you can find shelter from the heat flash and radiation fallout of the bomb explosions, you will be able to continue life as usual.

According to the current propaganda, the Russians will launch the first attack (it is unthinkable that we would consider such a thing), and the West will retaliate with a knock-out blow. After some two weeks of hiding, the survivors can resume business as usual, almost. At worst, some of our big cities will be missing, perhaps as much as thirty percent of the population will be 'pffft,' and Goldberg or Hodges may have succeeded to the presidency. But, if you happen to be outside of the limited blast areas, and if you have provided yourself with a fallout shelter, you will be all right. Further, you will be in a highly favorable position to capitalize on the big reconstruction program and general business prosperity that surely will follow the war.

Of course, it might be better not to have the war; but, alas, if it does come, we should be ready and willing to make the most of it. Anyway, the one great menace to world 'peace with freedom and justice' will be decapitated, and the remnant sympathizers, along with other heretics, can be hounded down and exterminated at leisure, a la McCarthy.

During all this time, the Russians are saying little about what strategy they will employ if war does come. Instead, they keep insisting that there will be no war, that peaceful solutions to world tensions must be found. At least, that is the Khrushchev line. For that reason, Khrushchev is particularly disliked by the war enthusiasts of the West. A peaceful settlement of the world's tensions is the last thing they want. They prefer an outpouring of threats and bluster from the other side as a validation of their own war-scare propaganda. So, when Khrushchev does make statements about Russia's military capability or, in a moment of enthusiasm, prophesies figuratively that 'we will bury you,' they are played up for all the propaganda value they will yield. Cantankerous old Stalin was a darling in the view of our war promoters compared to jovial, peace-spouting Khrushchev. (It is evident that Khrushchev has some opposition from hot-heads in his own ranks who, like similar hot-heads in America, feel that the war might as well be fought and gotten over with sooner than later.)

Since the Russians are not telling up about their strategy in case of war, the political and military "experts" on our side are figuring it out for us. It is assumed, perhaps wishfully, that the first objectives of the Russian missiles will be our big cities. That event is not viewed with too much trepidation. It would eliminate much of our architectural junk and open the way for a huge rebuilding program. It would clean out large numbers of our least useful citizens — those engaged in petty commerce and unskilled unemployments — and, thus, relieve the country of the burden of carrying them. (It is presumed that the Best People, who can afford the cost, will have protected themselves with shelters in the countryside and thus have a better chance to survive.) Many openings for new businesses and jobs would be created, which would solve some of the most distressing problems of the present time.

But we are not so sure that the Russians would oblige our expert analysts in that way. For one thing, it would be contrary to their historical pattern. For example, in World War II, the Russians did not go in for large-scale bombing of big cities. That was done mostly by the Americans and British, and on a smaller scale by the Germans. The Russians concentrated their fire on military objectives. Obviously, they would have nothing to gain now from relieving us of our major foci of economic parasites. It would be much smarter on their part to leave the cities alone and concentrate on disrupting the flowlines to the cities. If we were burdened with the problem of having to quell

our huge urban populations under conditions of extreme distress and panic, that would be about the worst disaster that could befall us. Millions of desperate, undisciplined persons roaming and looting the countryside would create such a havoc as to gladden the heart of any enemy.

For thousands of years, successful military strategy has been to drive the people of the countryside into the cities and let them deteriorate there until they were ready to surrender. In the old days, most big cities had food stores and other supplies for withstanding a prolonged siege. But few cities in America could survive even a few days of disrupted supply lines. If the fresh water supply were affected, the situation would be much worse.

We can be quite sure that the Soviet strategists are not letting our experts do their thinking for them; rather, that they will decide their own course of action. We do not know exactly what kinds of bombs they have nor how they would use them. No doubt, there will be some surprises for our side, perhaps even greater surprises than those we encountered in World War II when our military and political leaders gave the Russians about six weeks of effective combat against the German armies before suffering defeat. Our side was wrong then; it has been wrong repeatedly since then; and there is every indication that it will guess wrong again. Possibly, the Russians would not rely primarily on big bombs. They might have other kinds of weapons that could give us more trouble. Since the U. S. has been conducting hush-hush studies and development of chemical, bacteriological, and radiological materials for contamination of enemy territory, we can logically assume that others are doing likewise and possibly worse.

Even if we did, somehow, defeat the East, what would we do with the 'victory'? Assuming that we have devastated the cities and industries of the Soviet Union and China, not to mention other places, and that the West has been merely badly messed up here and in Western Europe, what happens then? What will the world have been made safe for this time? The answer had better be much more sensible than anything we have heard to date.

Technocracy does not support the view that war is inevitable and that we may as well get it over with. War will not solve our problems nor bring us a better way of life. It can bring us only devastation with large-scale annihilation and a whole batch of new problems. There are other ways of facing up to our future and our responsibilities as sensible human beings. In the first place, the very things that our leaders propose to fight the war over are not worth having; that is, the perpetuation of our corporate enterprise economy and the two-party political system. On the other hand, we hold no brief for the Soviet system of government enterprise and one-party politics. In our book, the two are merely different color shades of Price System cats.

North Americans have everything for building a superb social organism right here on our own Continent — including a blueprint of operations. There is nothing this Continent needs to borrow from abroad. The consolidation of North America into an integrated, self-operating unit is a big enough job for the immediate future. So, let us stop floundering around in a frantic effort to 'catch up' with the Russians and, instead, set up a social Area that will make those of Russia and China look ridiculous in comparison. We have the capability and the know-how. All that we lack is the mandate. That mandate must arise from some positive action on the part of the responsible, clear-thinking people of our society. It will not come from a spontaneous change of conscience among the politicians, among big business financiers, or among the military Brass; and it will not come from mobs chanting the death slogans of the Price System, such as 'Better Dead than Red.'

An immediate step to be taken in relieving world tensions and stabilizing the peace sufficiently so that this continent can go ahead with establishing a social mechanism suitable to the demands of our times — a Technocracy — is a negotiated vivendi with the U.S.S.R. Our negotiations should go even further and include an alliance with the Soviet Union for the purpose of maintaining peace and order in the world.

As things stand today, it is either this course or a continued muddling down the road to World War III. —Wilton Ivie

Correction on "Chart of Growth of Total Installed Technological Power in the United States." This was on page ten of the September issue of the *Technocrat*. The figures on the chart itself should be billions instead of millions.

There Ought to be a Law

Dear Senator:

I see where the President wants us all to have fallout shelters for protection when the Russians send missiles over here to wipe us out. Now, mind you, I don't object to having a shelter if I could afford it and it wasn't too complicated to build. But it happens that I live near a big city, and I don't think it would be safe to have a shelter when all those people start evacuating into the countryside. I'm afraid, if I had a shelter, these people would want to crowd into it and maybe even kill me to get it for themselves.

I am not so sure that the shelters would keep the people alive very long if we got into a big war or if life would be worth living even if we did survive the bombs. But I won't talk about that now. If we are going to have shelters, I think there should be enough for everybody so some won't be trying to take them away from others. So I think you should pass a law which would require the government to build shelters for everybody. Even if we never had to use them, they would do us a lot of good. It would use up a lot of our surplus supplies and would make lots of jobs. The people would have to pay for them anyway, either through higher taxes or out of their own pockets.

Besides, if we all got killed in the war, we wouldn't be around to pay any more taxes; so I think the government should be interested in keeping us alive just for the sake of taxing us if nothing else. Another thing, if the government built the shelters and got them all fixed up for us, we would know that they were properly built and set up, just like things are in the army.

I also think it would be a good idea, after the shelters were built, for the government to make everybody live in them for two weeks just like we were having a war. That might help us to decide whether we really wanted to fight the Russians or make peace with them beforehand. If we did have a war, they would make good burial places if nothing else. And if we didn't have a war, they could be used for storing surplus junk. Anyway, they would put people to work and help bring back prosperity, so I think it is a good idea to have shelters, but only if there are enough for everybody.

Sincerely yours,
BEETAL BRAYNE

—Editorial in *Automation Progress* (London, Eng.) February, 1961.

"Many years ago, H. G. Wells in one of his books coined the phrase 'Adapt or Perish.' It was a dispassionate statement of fact that in a changing world, men also must change their mental attitudes and adapt themselves to new conditions. There can be no compromise. Existing circumstances, new developments and their bearing on the future must be acknowledged and must be used for the benefit of humanity. It is useless to muddle through, or to just hope for the best.

'Nature is supremely indifferent to whichever way we choose to go; it is immaterial to her whether we survive or destroy ourselves. The dinosaurs were probably quite happy wallowing in the primeval swamps, secure in the knowledge that they were lords of creation, all unknowing that their midget brains made them unfit to survive. So they vanished, because of their inability to adapt.

"We are the dinosaurs of the present. Governed basically by men who have to be dragged kicking and screaming from one scientific and humanitarian truth to another, persuaded by the bird brains of the admass generation to worship at the shrines of false gods, threatened by the prostitution of practically every new discovery to warlike ends, we are wrapped around by a comfortable mental fog which prevents us from peering too closely toward the future. There is no indication that Nature looks upon us with any more kindliness than she did toward other forms of life that were not willing to adapt. A cosmic and indifferent shrug is the best we can hope for."

U. S. Business Goes Foreign

Boston Traveler, June 10, by Ray Cromley.

Washington—U. S. industry is swarming abroad faster than ever.

The 3,000 U. S. concerns with foreign investments will up their overseas stake this year by an estimated $2.5 billion. This one year's gain will be equivalent to almost a quarter of all U. S. investments abroad a decade ago.

During the next two years General Motors reportedly will add half a billion dollars to its $1.2 billion overseas operation.

U. S. Rubber will spend $5 million expanding its present $8 million facilities abroad.

U. S. firms are not putting most of the new cash into raw materials, oil drilling and ore mining as they did in the past. They're putting it into modern factories, many of them highly automated.

Here are reports current in trade circles:

American Machine and Foundry invested $11 million abroad in 1960. Alcoa Aluminum placed $200 million abroad in the past three years. DuPont plans half ownership of a $9 million neoprene plant in Japan.

Raytheon, now operating in Palermo, Italy, is going into a large electronics combine which will make missile components.

F. J. Stokes is pushing automatic plastic molding machinery manufacturing in Scotland. Warner Swasey is hitting hard on automatic machine tool making in England.

Many new U. S. plants abroad are more modern than average existing American factories in machinery, efficiency of plant layout and overall productivity.

By the end of 1961, U. S. private investment in foreign factories will be one and a half times that at the start of 1958, three times that in 1950.

The bulk of the new U. S. factory investment is not going to backward lands. It is going into the world's leading industrial areas — Western Europe, Canada, Australia, Japan — where labor productivity is high and where local management is efficient. Note these reports in the trade:

More than 300 U. S. firms already are in Italy. In the past year, Dow Chemical began construction of a multi-million dollar plant there.

Crucible Steel bought control of a Milan steel company. RCA is going into a joint electronics manufacturing firm in Southern Italy. Union Carbide is said to be expanding chemical output in Sicily.

Chemstrand will up the capacity of its synthetic fibre plant in Ireland 50 percent this year. Merck, Sharp and Dohme will expand chemical production at Ponders End in Britain.

Superior Tube is reportedly building a facility to make hypodermic syringes in Plymouth, England.

Minnesota Mining and Manufacturing, Pfizer and Remington Rand are understood to be increasing their capital investment in Western Germany.

Allegheny Ludlum has a half interest in a new $10 million plant in Belgium, where steel production is scheduled to begin late in 1962. Pittsburgh Plate Glass will take a half interest in a plant to be put up in the Netherlands.

Bell International Corporation is going into the making of steel abrasives for cleaning metal in France. Hercules Powder is said to be putting up a plant in Finland to turn out paper-making chemicals.

General Foods will make instant coffee in Japan. Parke, Davis is going in with a Japanese firm to make antibiotics and vitamins. Reynolds Aluminum will invest jointly in a refining and reduction plant in Japan.

Corn Products and Funk Brothers Seed Co. have a new firm in France to develop and market a hybrid corn.

Monsanto; Dow Chemical; Mead Johnson; Smith, Klein and French; Borden Chemical and Allied Chemical are reportedly going into new joint companies in Australia.

U. S. private investments in Western Europe are expected to hit $3 billion by the end of this year, nearly five times the total in the early 1950s. Nearly half of U. S. investments and reinvestments of U. S. manufacturing are now going into Britain and Western Europe.

U. S. investments in Australia are nearing the billion dollar mark, three times the amount 10 years ago. A third of all U. S. investment is in Canada.

But investments are going everywhere — even to strife-torn South Africa, not-too-friendly Ghana, Red-threatened Southeast Asia.

Kaiser is said to be planning to invest in a $178 million aluminum reduction plant to be built

(Concluded on Page 26)

War and Peace . . . and the Problem of BERLIN

Fred Warner Neal, Professor of International Relations and Government at the Claremont Graduate School, is well known in the field of foreign relations. He is the author of *Titoism in Action* (1958) and made a study on Yugoslavia and Eastern Europe for the Twentieth Century Fund. His study, *U. S. Foreign Policy and Soviet Union*, made under the auspices of the Center for Study of Democratic Institutions, will be published shortly, as well as his book on U. S.-Soviet Relations.

From 1939 to 1943, Prof. Neal was the Washington correspondenet for the Wall Street Journal. From 1946 to 1948 he was State Department Consultant on Russian Affairs and Chief of Foreign Economic Research on Eastern Europe. 1950-51 he was a Fulbright research fellow at the University of Paris, and in the coming year will be Fulbright Professor at the Institute des Sciences Politiques.

Under the cloak of this Tolstoyian title, I would like to take up a highly controversial matter, the matter of Berlin, and I would like to take it up in terms that court disagreement. But one trouble with foreign policy, like this convocation series thus far, is that there is not too much disagreement and controversy, but too little. In my own limited way, in discussing the problem of Berlin in the context of the broader topic of war and peace, I should like to contribute to making up the lack.

It is tragically understandable that we Americans are perturbed and perplexed about the problem of Berlin. It is a vexatious problem. But we are talking here about Berlin in relation to war and peace. Words like "perturbed" and "perplexed" and "vexatious" are not words properly applied to a problem involving the issue of war or peace. Maybe they were once. But today, in the thermonuclear age, war or peace not only means victory or defeat; war or peace today means survival or exinction. One cannot talk sanely about any problem in international relations—let alone Berlin—unless this cardinal fact is kept in mind.

Now under what conditions does one sanely undertake extinction? Under what conditions does one consider certain death? There may be those, employing the grisly neo-logic and neo-morality of Herman Kahn and the Rand Corporation, who debate about what survival of a thermonuclear holocaust means; whether it means 100 million killed or only 50 million. But I am not among them. Such debate has all the reality of medieval polemics about how many angels on the head of a pin. It is quite true that, if there were a thermonuclear war, some Americans might survive—perhaps millions—although under what conditions of fallout and radiocativity one can only speculate in horror—some might survive, but I defy any sane and honest person to challenge me when I say that under no possible, conceivable circumstances could the American system of democracy and humanism and free private enterprise survive a thermonuclear war. The apparent failure of American public leaders to understand this fact is perhaps the greatest danger we face, and the failure of American public leaders to make it clear to our people is their most awful dereliction of duty.

Does Berlin Actually Involve the Question of War?

Now, does this mean that under no conceivable conditions one should risk thermonuclear war? I respect those who answer in the affirmative, but I cannot agree. I can conceive of conditions in which a thermonuclear war—with all its immorality and horror and illogic—should be risked. Some, but not very many. But that there may be any at all only testifies to the madness of the world we live in. Essentially, the only conditions under which it would ever be permissible to risk thermonuclear war would be those in which a vital interest of the United States was threatened, in which our security was directly menaced. This is one reason—and the most important one—why a review of what constitutes vital American interests, of what constitutes a menace to our security, is long overdue.

Let me say before going any further—and let me say it as emphatically as I can—that I am profoundly convinced there is no conceivable justification for considering that Berlin today rationally involves the question of peace or war. I do not doubt the honesty of those of our leaders who tell us that it does. But I do doubt their ability, their judgment, their knowledge, their objectivity and their sense of perspective and proportion. They are, after all, the same men who were telling us just a few short months ago that the problem of Laos presented to us the question of war or peace —the problem of Laos, that was created originally by American intervention to overthrow a constitutionally established and popularly supported government. The problem of Laos is now fading to obscurity because those people who told us that it involved the question of war or peace are accepting the same government whose overthrow we originally accomplished, and are abandoning the regime for which they told us we might have to go to war. Those people who are telling us Berlin involves the question of war or peace are the same people, also, who so sadly compromised us in Cuba an even shorter time ago because they do not know how to recognize a social revolution when they see one and seem to know as little about Communism as they do about international politics, which is very little indeed. Must I now accept without question the judgment of these same men that whether I and my family, and you and your families, and we and our country, and our society and its civilization, live or die is to be determined by what happens in Berlin?

I agree just as much as anyone that, as the saying has it, we should not give in to the Soviet Union, or to anybody else, where our vital interest, our security, is at stake. And I agree just as much as anybody that, as the saying has it, we should not let ourselves "be pushed around by the Russians." But the truth is that our vital interest and our security are not involved in Berlin and that the Russians are not "pushing us around." A great deal of contrary talk is coming out of Washington these days, and this, then, becomes the basis for even milder newspaper talk. If any of this has any other purpose than to whip up a war hysteria, I don't know what it is. Admittedly Southern California is an unusual case study in this regard. But this matter of Berlin is distorted out of all recognition not only in our Southern California but throughout the nation. I would be willing to bet ten dinars to a ruble, that very, very few people, here or elsewhere, who accept this extreme view of the matter even know what the Russians are really proposing about Berlin.

What the Russians Want to Do . . .

What, in fact, are they proposing? Not that the United States be "pushed out of Berlin." We would be perfectly right in refusing to be "pushed out of Berlin," but the Russians are not proposing this. We are right, too, in feeling that we have commitments to the West Berliners—"the freedom-loving West-Berliners,—to save them from Communism," as the saying goes. Having made so loudly and so often these commitments—whether they are wise or not—we cannot, of course, suddenly ignore them now. But the Russians are not asking for this, either. What the Russians want to do, they say, is to make a German peace treaty that would normalize and formalize their East German State and the Oder-Niesse boundary with Poland, and normalize and formalize the highly abnormal division of Berlin. Specifically, Mr. Khrushchev says, such treaty could provide for stationing of American and other Western troops in West Berlin. It could provide, he says, even that which we don't have now, despite some assertions to the contrary—legal right of access through the territory of East Germany. Do we want this; Or if we don't why? And what do we want? To answer these questions, it is necessary to look at Berlin in the larger context of Germany.

The Division of Berlin Into Zones . . .

The problem of Berlin arose as a result of the four-power occupation of Germany following the defeat of the Nazis. Germany was, as you all know, divided into zones, with the Soviet armed forces controlling the Eastern zone—roughly that area already occupied by them at the end of the war—and two Western zones, one for the Americans and one for the British; and the Americans subsequently brought in the French, to whom was given control of a part of our original zone. Each military commander was to have absolute authority on political matters in his own zone, subject to the proviso that matters affecting the whole of Germany, especially economic matters, were to be determined by a quadripartite allied control council situated in Berlin. Berlin itself was divided into four sectors, one for each occupying power. And Berlin was deep inside the Soviet zone. There is room for questioning the wisdom of the details

of this arrangement—which resulted from the Yalta and Postdam conferences—and even more room for criticizing the failure of the Americans and their Western allies to obtain a formal agreement guaranteeing them free access at all times to West Berlin, but it does little good to dwell on these points now.

The Breakdown of Quadripartite Control . . .

The aim of this arrangement—agreed on by all concerned—was that after taking of reparations and reordering German political and economic life, the four zones would be unified into a single German state. Meanwhile, at Potsdam, the powers agreed to a revision of Germany's Eastern borders, in favor of the Poles and the Russians. The boundary tentatively agreed on was roughly along the line of the Oder and Niesse Rivers, with this line to be ratified, give or take a little here or there, by a German peace treaty later. This peace treaty has never been worked out, and that is, in part, what Khrushchev wants now. One reason why there was no peace treaty is that quadripartite control of Germany broke down almost before it began. It is fashionable in the United States to put the blame for this break-down altogether on the Soviet Union, just as it is fashionable in the USSR to put the blame altogether on the United States. Both were guilty, and in just about equal degree. But there was also the disruptive role of the French, who never signed the Potsdam agreement even when they were made an occupying power. Paris insisted that if the USSR and Poland were to get part of Germany on the East, France should get part of Germany on the West. And failing this, the French obstructed the work of the Allied Control Council, which, consequently, was unable to establish all-German political parties, labor organizations, postal system or anything else.

Meanwhile, the Russians—destroyed, impoverished and greedy—began an action which certainly violated the Potsdam agreement in spirit if not in letter—the taking of reparations from their zone of Germany by operating factories on the spot and shipping of all the production to the USSR, rather than by the slower and supposedly agreed upon process of dismantling. This caused a strain on the occupation economy in all zones and had a severe inflationary effect. The West retaliated by reneging on promised reparations shipments from its zones to the USSR. Moscow in turn retaliated by reneging on promised food and fertilizer shipments from its zone to the Western zones. Then the Western powers, perhaps necessarily but still in clear violation of the treaty, adopted a West zonal currency and prepared to merge their three zones into one. It was in retaliation for this that Moscow in 1948 began the Berlin Blockade.

Enter the Cold War Freeze . . .

By now the wartime agreements on Germany were already, as Mr. James P. Warburg says, a dead letter. The cold war was well under way. And the United States was committed to the idea, long propagated by men like the late James V. Forrestal, that it was necessary to build up Germany as a military buffer to Soviet power. To accomplish this, the Western powers, under American leadership, took a fateful step that changed the whole complexion of the German situation. They established their merged Western zones into a new, separate, independent German state—West Germany. Originally the rationale for the Western powers being in Berlin was that this was necessary for quadripartite control and administration of Germany, looking toward a unified German state with Berlin as its capital. The Western action in establishing a West German state brought an abrupt end to this rationale. As many foresaw, the Soviet Union almost immediately followed suit and created an East German state under its domination. There were now two German states, east and west, one as valid and as legal as the other.

At this point some kind of German unification might still have been possible. It was now made virtually impossible, not by Soviet action but by American action in launching the militarization of the West German state. There was already, it is true, a sizeable police force in existence in East Germany. While the evidence is that these so-called East German "alert groups" were primarily for the purpose of asserting Communist control, they did provide a nucleus on which an army could be built. But they were not an army. The only real military force in East Germany was the Soviet Army, just as the only real military force in West Germany was the American army, backed by British and French troops.

The Birth of NATO and the Militarization of Germany . . .

The Americans and some of their Western allies, however, were obsessed with fear of Soviet military aggression, with fear that suddenly the Soviet army might begin a march toward the English Channel. One does not have to debate here the validity of this fear, although, as some of

you know, I am firmly in agreement with George Kennan and many others who feel that such a danger of Soviet military aggression never existed. To guard against it, however, the Americans and their allies organized the North Atlantic Treaty Organization. NATO then, as NATO up until recently, consisted primarily of American troops and a paper organization. It was apparent that if NATO was ever to be anything else, it would have to have participation by West Germany, already beginning its amazing economic recovery. Accordingly, the Americans took the second fateful step, beginning—against the violent opposition of not only the USSR but many others—the militarization of West Germany. The government of Konrad Adenauer, if not its people, were more than willing. Soon the Soviet Union again followed suit and militarized East Germany.

Now ostensibly our goal was still unification —or by this time, better stated, reunification—of Germany. There was, obviously, only one way this could ever be accomplished, and this was by agreement with the Soviet Union. But the Soviet Union made it clear over and over again that they would never agree to reunification if it meant the possibility of a rearmed Germany in NATO. The United States, meanwhile, had oriented its whole European policy around the idea of a strong NATO, which meant German participation. That being the basis of our policy, it followed that we would not agree that a reunified Germany must be excluded from NATO. The result was that there were never—at any time—any real negotiations on German reunification. It is a misstatement of fact bordering on falsehood to say, as Secretary Dulles and President Eisenhower once said, that the Soviet Union agreed at the 1955 Summit Conference to reunification by free elections and then went back on its pledge. The Soviet agreement was *only* on condition that the reunified German state be excluded from NATO, and to this we would not consent.

Agreement Might Have Been Possible . . .

Would the Russians ever have agreed to a reunified Germany on terms we could have accepted? Maybe not. But we don't know. In the apt words of George Kennan, "we shall never know whether the Russians will go through an open door until we stop trying to push them through a closed one." Why might the Russians have agreed to go through an open door, that is, consented to a non-Communist and neutral reunified Germany? One reason is that this would have formalized the territorial arrangements in Eastern Europe. Another is that it would have removed Western troops from the border of this vital Soviet core interest. A third is that it would have removed from the heart of Europe a problem which, unsolved, constantly threatened to disrupt the peace. There are two indications that the Russians might have gone through an open door if we had stopped trying to force them through a closed one. One indication was the Soviet endorsement of proposals for mutual disengagement of troops from Central Europe and even from parts of their own Eastern Europe —proposals which we refused to discuss. Another indication is what happened in East Germany. The East German state is, of course, a Soviet puppet, tight under the Soviet thumb, and always has been. But it is highly significant that there had taken place no full socialization in East Germany, of the type that took place in the Eastern European satellites. Neither full nationalization nor any collectivization of agriculture to speak of had been undertaken; there even existed the shells of opposition political parties, however meaningless. It was only in 1958, when West Germany was well on its way to full rearmament and completely integrated in the Western system, and when disengagement was turned down as a subject for discussion, that the full satellization of East Germany took place and that East Germany became fully integrated into the Soviet bloc and given an equal status with the other satellite states.

Reunification Possibilities Vanish . . .

Up until this time, the rationale for Western presence in Berlin—now no longer legal—was diplomatic. That is, it was a gambit in the politics of reunification, and as such it made sense. Since Berlin was symbolic as the traditional capital of Germany, Western presence there, keeping the city from full Communist influence, might have been a factor in the kind of reunification and in the orientation of a reunified German state. But now reunification was out of the question. No longer did the Russians want it, if they ever did. And the West Germans, and the Americans also, did not want it, no matter what they said; or if they did want it, the methods they pursued—insistence on reunified Germany in NATO—now more clearly than ever prevented the wish from having any real meaning. This being the case, even the diplomatic rationale for our being in Berlin—that it was a maneuver concerned with reunification —vanished.

It was at this time that Khrushchev broached the idea of a German peace treaty and an alteration of the situation in Berlin.

The Resurgence of West Germany . . . Economically

It is necessary here to say a word about West Germany. It is important to realize that West Germany is by far and away the strongest nation in Europe, economically and militarily also, if the USSR is excluded. It dominates the Common Market. Among the non-American members, it dominates NATO. And the fact is that West Germany has come also to dominate American policy in Europe.

Now West Germany, just like all other states, has its own interests, German interests. These are not American interests, except, perhaps, incidentally. This is entirely natural. But it is not entirely natural that the United States continues to act as though German interests were always and necessarily our own interests. The West made this mistake about Germany once before, after the Locarno Treaty. The British and French actually expected Germany to help them maintain the Versailles Treaty, which was aimed against Germany. Operating on the incredibly naive assumption that because Foreign Minister Stresemann talked a good game of "Western unity," the British and French never suspected that he was, at the same time, beginning the secret and illegal rearmament of Germany that was to have its tragic climax in the Gotterdammerung of World War II.

Now I do not think that the West German state is like the Nazi Reich—although it does have many former Nazis in high places—nor that it has intentions of trying to dominate Europe militarily. But I do think that West Germany, in furthering of German interests as it sees them, is a provocative, disruptive force which as much as any other single factor stands in the way of a peaceful European settlement. In one way, the West German policy has the result—whether or not the intention—of doing exactly what Nazi policy sought to do—which is to cause conflict between the United States and the Soviet Union, albeit for different reasons.

And Militarily . . .

It must be remembered that Germans are Germans. To say this is not to make an invidious slur on a whole people. But it is to say that politically the Germans, en masse, as a social group, have repeatedly demonstrated their political immaturity. And I, for one, can see nothing in the policy of West Germany now that demonstrates otherwise.

Certainly American policy cannot escape some onus here. We do not have to do what the West Germans want us to do. The impact of the war created a profound anti-militarism among Germans, especially young Germans. It is thanks to our own efforts, in part, that they now have a government which is thoroughly militarily oriented and which is steadily becoming more so. This has come so gradually that one is hardly aware of it. I well recall being in Frankfurt and Bonn in 1950, on a mission for the U. S. State Department, when there were newspaper reports that the West German government had a "defense adviser." This was indignantly denied by both the Americans and the Germans, although everybody knew it was true. Then it was admitted, but the West Germans said, solemnly, no defense ministry. A few months later the defense adviser became minister of defense, but, the West Germans said, no army. A few months later there began to be organized a German army, but said the West Germans, no traditional uniforms and no generals. A few months later the army donned the traditional uniforms and the rank of general was reestablished, but, it was said, no general staff, and so on. About the same time West Germany adopted as its national anthem the infamous "Deutschland uber Alles," but, it was said, the first verse, containing the offensive words, would not be used. Now the anthem begins, as before, "Deutschland, Deutschland, uber Alles." Goethe, in an untypical poetic burst of patriotism, once wrote that when he thought of Germany he could not sleep. It is not surprising that today a great many other people cannot sleep when they think of Germany—but for other reasons.

Why the Bonn Government Refused Post-War Settlements . . .

The provocative aspect of West German policy is illustrated in the altogether unwarranted claim of the Adenauer government to jurisdiction of Berlin. It is illustrated by the refusal to accept the Oder-Niesse line. It is illustrated by the inclusion in the Bonn government of a "minister of all-German affairs" and by West Germany's refusal—backed by the United States—to recognize the East German government and by its use of diplomatic pressure on any state that does not recog-

nize it. Perhaps the single largest identifiable political group in West Germany is the so-called Volksduetsche, thoe Germans who fled or were expelled from the Prussian provinces now part of Poland and Russia, from the Sudetenland in Czechoslovakia and from other parts of Eastern Europe. They tend to be strident nationalists. What the Volkdeutsche want, of course, is a return to Germany of their property. They are dispossesed and desperate. Officially they abjure thoughts of war. But how they expect to achieve a return of territory from Poland and the Soviet Union and Czechoslovakia, they don't say. These Volksduetsche are a significant factor in the Bonn government's refusal to accept the post-war settlements. And the West German policy is a significant factor in the American refusal to accept them.

Why No Military Disengagement . . .

West German policy is not only provocative but arrogantly so. The one hope of a real German settlement might have been military disengagement, and at one point President Eisenhower seems to have considered this idea. But the West German government as much as said, "you can't adopt such a policy," that is, having rearmed, they were not going to disarm and the United States couldn't make them. It was right here in Claremont, in 1958, in Bridges Auditorium, that the German Ambassador, Dr. Grewe, publicly defied the United States in this regard. He was not arrogant in tone, but that is the only word for the content of his remarks. He was, as I recall, applauded roundly.

Of course, the West Germans are right. It is now too late; we can't make the Germans disarm if they don't want to. And far from wanting to, they are now demanding nuclear weapons, as they demanded in the past, successfully, operational bases for their troops in Western Europe. One might well ask, "Who won World War II, anyway?"

In the same way, the West Germans are now calling the tune on Berlin and are, in effect, dictating American policy. No compromise on Berlin, the West Germans say. And why? Because Herr Adenauer insists that West Berlin is a part of West Germany. He and his government insist that the East German state has no right to exist. They insist on German unity, by which they simply mean expanding the present West German republic to include all of Germany, including—including, mind you—those former parts of Prussia now incorporated into Poland and the Soviet Union. A German peace treaty, such as called for by Khrushchev, would, of course, "legalize" the division of Germany, would require the de facto if not de jure recognition of East Germany and would force the West Germans to accept the Oder-Niesse line.

Now obviously if the Soviet Union is to be defied on these matters, it will be defied by the United States, not by West Germany. Come on, say the West Germans, let's you defy the Russians. One can excuse the West Germans for taking this line more easily than one can excuse the Americans for falling for it. Is it not time that we have a policy of our own on Berlin and on Germany, reflecting American rather than German interests?

The U. S. Interests In Berlin . . .

Just what American interests are affected by the Soviet proposal on Berlin? To answer this it must first be realized that the present situation in Berlin is highly abnormal and impermanent by its very nature. It is absolute nonsense to talk about this Berlin situation—as Secretary of State Rusk has done—as being part of a "status quo" that must be maintained at all costs. It cannot be maintained indefinitely, no matter what the Russians do or don't do. It is no policy at all to reiterate that we will "stand firm" in such a situation. And it is only sophistry to asert—as President Kennedy and others have done—that since the United States is demanding no change in the Berlin situation, the issue arises only because of Soviet trouble-making. Our position in Berlin is untenable militarily, diplomatically and legally. The handful of American troops in the city no more keeps the Russians out than does the Claremont ROTC. If the Russians are kept out by anything other than their own restraint, it is by American nuclear deterrent power. Meanwhile, peace treaty or no peace treaty, we and the West Berliners are at the mercy of the Russians and the East Germans. It is high time we faced up to this unpleasant fact. There are a thousand and one things they could do to make the whole jerry-built structure collapse any time they wanted to. Merely changing the currency system would, as Mayor Brandt has said, bring an economic collapse. Endless examination of passage papers or constant repairs on roads and bridges could halt our access. Are we prepared to go to war over the Communists' right to change their own currency? Or over their rights to repair roads and bridges? Or over the extent of their bureaucratic inefficiency?

The fact is that, given the unlikelihood of reunification and given the hard, cold realities of international politics, Berlin ultimately is almost certainly going to become the capital of the state in which it is located—East Germany. But we are not being asked to consider that. Compromises are open to us. One does not have to agree with the Khrushchev proposals to see that the Soviet concern over the present situation is not unnatural. What is the present situation as it must appear to Moscow? A western enclave ensconced far inside one of their satellite states. West Germany and the United States refusing to recognize East Germany, refusing to accept the Oder-Niesse line, talking about ending Soviet hegemony in Eastern Europe. Even without their paranoia, the Russians might see all this as a threat. The fact is that the Soviet position on Berlin is not extreme, that it has not lacked restraint. Mr. Khrushchev has repeated over a period of years—at times almost plaintively—that he considers the present impermanent arrangement a source of instability in Central Europe and that the USSR attaches great interest to a change.

How Realistic Is U. S. Policy Concerning Germany?

Actually, it is by no means clear that our position in Berlin might not actually be enhanced by a peace treaty something like the one the Soviet Union proposes. If we want to go to war over our rights in Berlin or over what the Communists might do to the freedom-loving people of West Berlin, we can do so under conditions of a peace treaty as well as we can now. To say that the Soviet proposal does not adversely affect our true interest in Berlin assumes, of course, that our interest is in European stability and reduction of tensions. There can be European stability and reduction of tensions, however, only if—lacking reunification of Germany—only if we—and Bonn—accept the reality of the East German state and the Oder-Niesse line. On what basis have we thus far refused to accept these realities? The implicit American assumption that we had a right to create a West German state but that the Soviet Union did not have a right to create an East German state is so untenable that we do not even assert it in this fashion, but that is what our position amounts to. Do we expect the Soviet Union to agree with us and, out of the goodness of its heart and love of capitalism, voluntarily turn East Germany over to West Germany and force the Poles to give up their new territories and restore the former Prussian city of Koenigsberg to a Germany controlling NATO? If we don't expect this, what do we expect? What do the West Germans expect? Presumably we do not intend to try to bring about these changes by force, but can we be sure, in the present milieu, the Russians—and the East Germans and the Poles—understand this? Actually our policy is based on utter unreality. But can we expect to reassure the Russians by saying, "We know our policy doesn't make any sense, but please believe it just reflects a lack of realism on our part rather than an intention to force changes harmful to your interests"?

No, of course, we cannot say this. Nor does our government see it this way. Mr. Rusk recently referred to what he called "the many contradictions and historical fallacies in the present position of the Soviet leaders (on Germany)." As one who accepts and defends the policies of Secretaries Acheson and Dulles on Germany, Mr. Rusk ought to know a lot about contradictions and historical fallacies. But sometimes too much of a concern with the mote in the eyes of others obscures the mote in one's own eye.

For a U. S. Policy Based on U. S. (Not West German) Interests

There has been a lot of talk about taking the initiative away from the Communists, and this is long overdue. The present Berlin situation would be a good place to start. Indeed, if we are not prepared to risk war in a vain attempt to preserve a "status quo" that cannot be preserved and does not involve our vital interest in any event, and if we do not wish to accept that Soviet proposal, there is no alternative to taking the initiative. And in one sense that is just what Khrushchev is inviting us to do. Maybe we can't come up with a workable proposal, but we will never know until we try. There are a number of obvious proposals that could be made. Senator Mansfield has offered one—creating a united Berlin as a free city guaranteed by both NATO and Warsaw Pact and policed by "international peace teams." The Mansfield proposal may not be altogether realistic, but it is, at least, a proposal. Another would be demilitarization of both East and West Berlin, with the latter in a special status. United Nations supervision of West Berlin is also a possibility. A joint East-West German condominium of the whole of Berlin is still another, and this by no means exhausts the possibilities. But if we are

to have anything better than the Russians suggest, we must take the initiative and propose something. The West Germans, of course, will not like it. It is high time, I think, that the West Germans be put in their place on this matter. It is high time that American policy assert itself in behalf of real American interests, not imagined American interests or West German interests. I can think of no better place to start than for our national leaders to make realistic rather than propaganda statements about the whole issue to the American people. It is such a course that takes real courage, rather than the pseudo courage about standing firm and going to war, and it is real courage alone that will preserve our interests and integrity and at the same time spare us a thermonuclear war. Which kind of courage our present leaders have, we may be soon about to see.

Cultures That Do Not Meet

Technocracy has long proposed that the primary controls of our society and its major decisions be transferred to the realm of science and technology and out of the realm of the mumbo jumbo artists of business, politics, and moral philosophy. The technical control of social affairs has, in recent years, been dubbed 'technocracy' by various critical writers. 'Technocracy,' as they define it, is anathema to the mumbo jumbo crowd: partly because, under it, the 'artists' would have little function and would rate even less reward and recognition, and partly because 'technocracy' is so strange to their way of thinking that they can't comprehend it or feel at ease with it.

The intellectual and cultural schism between the people trained in science and technology, on the one side, and those trained in the liberal arts, on the other, was made a subject of discussion and debate among academic intellectuals recently when C. P. Snow, British scientist, novelist, corporation executive, and civil servant, published a treatise on the subject of Two Cultures and showed their incompatability. The liberal arts group has been much disturbed and has tried repeatedly to refute Snow's thesis. The October 1961 issue of the Bulletin of the Atomic Scientists carries a lead article by one Lloyd A. Fallers entitled 'C. P. Snow and the Third Culture,' in which an attempt is made to show that there is really a third culture which bridges the other two. It is soon evident that Fallers is hostile to the idea of 'technocracy' and is very friendly toward the traditional culture on the other side of the schism.

Fallers takes issue with the concept that society needs an image of the future and a plan for attaining that image. He is 'bugged' by the idea that a society should know where it is going and make plans for getting there. He seems to abhor the idea of our deciding in advance where we are going, for that would indicate the road we would have to take to get there. It is preferable, presumably, to have no specific destination in view, for then we are 'free' to follow ANY road without regard as to where it may take us.

To support this fallacy, Fallers more-or-less equates 'technocracy' with 'totalitarianism' and proceeds to name certain totalitarian experiments which, in his estimation, have flopped, such as the French Revolution, the communist regimes of Russia and China, and 'many less prominent ones.' He evidently assumes that he has made his point when he takes selected examples from political totalitarianism and calls them 'technocratic.' Actually, politics in any form derive their characteristics from the 'humanitarian' side of our culture, hence are by nature full of fallacies. He may as well have included the totalitarianism of fascist Germany under Hitler, with its thousand-year Plan, among his examples; but he cagily neglects to do so. We would guess from his statements that Fallers' sympathies are pro-fascist and anti-progress; hence, German industrialism and militarism under fascism escapes the smear of his 'technocratic' stigma. On the other hand, he synonymizes 'technocracy' with political forms which attempt to apply the philosophy of communism to administrative affairs, because they make use of science and technology in their development programs; then, he picks out certain 'humanistic' errors of those 'totalitarianisms' and uses them to ridicule 'technocracy.' For example:

> 'Anyone who believes in the superior rationality of totalitarian planning will find it instructive to read the account by the Indian

demographer, S. Chandrasekhar, in his recent *Red China, an Asian View*, of China's approach to that bogey of Asian economic development, population explosion. An earlier program of birth control has been dropped, on the ground that 'from the point of view of work to be done and the targets to be achieved, 650,000,000 people are not nearly enough, and the country is really underpopulated and there is an acute labor shortage!'

There is nothing scientific about such an argument against birth control; it is a 'humanistic' argument, and it may just as well have originated in that sanctum sanctorum of Western Culture, the Vatican, as from the headquarters of political strategy in China.

Faller sees 'social science' as a Third Culture, linking the other two. But no scientist we know sees any link between Social Science as it is applied today and natural science; the former is far closer akin to the liberal arts.

Instead of refuting the theory of two widely separated and incompatible cultures, it would seem to us that Fallers confirms it. The culture of science or 'technocracy' does not reach him, and he carelessly confuses it with things that are in no way related. His views are distinctly those of the other side of the schism, not those of a middle course; they are completely strange to the World of Science.

Possibly there is a small link of a sort between the culture of the natural sciences and that of the 'humanities'; if so, it would be typified in the life of the production engineer of an industrial corportion or the field superintendent of construction. These functionaries are caught in the middle between the culture of technology and that of traditional economics. They see, at first hand, the tools of science being used to provide certain positive facilities for mankind on the one hand and to achieve the objectives of 'humanist' culture — economic agrandizement of certain promoters — on the other hand.

Technocracy does not propose, as some of its critics seem to insist and as Fallers hints, that society destroy all the physical and social culture of the past and immediately replace it with a strange, austere, new culture. We recognize that human beings will always need and want to lead subjective lives, and that cultural patterns, essentially subjective in nature, will continue to prevail. But there is nothing sacred in antiquity, as such. As the environment changes, new cultural forms are sure to arise and certain old forms die out, as they have been doing all along. But let us realize that Culture is a subjective efflorescence on the social mechanism and not an integral part of it. If the art of Dali or Picasso gives someone a subjective thrill, okay; but don't let us try making it a part of the operating blueprint of a Continent.

Let the society of the future retain a few samples of pyramids, cathedrals, castles, political administrative buildings, battleships, etc., as souvenirs of the glory of past cultures; and let it also retain a few samples of slums, prisons, torture chambers, and sweatshops as souvenirs of their degradation. Let the historical libraries contain books and manuscripts of literature, philosophy, and documentation of the past; but let's not become deluded with the belief that much of it is pertinent to the social operations of the future.

Science and technology provide us with the answers to the technical problems of food, clothing, shelter, health, education, transportation, communication, defense, etc. Science and technology have virtually solved the problems of production; but traditional culture, in whose hands the problem of distribution still remains, has made no progress of significance in the past thousand years.

Our society is seriously in need of complete technological control in its administrative affairs.

—Techno Critic

Federation News, Sept. 16. — "Factory," a McGraw-Hill publication, estimates that 325,000 "factory workers will have their jobs shot out from under them by the installation of labor-saving devices in their plants next year."

The estimate was based on a survey of 525 plants employing between 100 and 2500 workers each.

California Farmer, Oct. 21. — Fifteen years ago the farmer could net $3,000 if he grossed $6,000 on his operation . . . today he would have to gross $10,000 to get the $3,000 net . . . and one prediction says that in 10 years a farmer will sell $15,000 worth of goods just to get $3,000 in net income.

RESEARCH BULLETIN

Land of Plenty!

The AFL-CIO has described as "encouraging news" a government report that average family income rose again in 1960, but it assailed as "indefensible" what it pointed to as a widening gap between lower and higher income groups.

"Even more disturbing is the tragically insufficient income share of the lowest fifth is tending to fall further."

Some 7.2 million families — one of every eight — existed on incomes of under $2000 in 1960. . . Federation News, Aug. 19.

(Organized Labor is one great force which could, if it would, back the idea of Technocracy and bring about an orderly change. Instead their leaders shed crocodile tears over those poor families who have to exist on less than $2,000 a year.)

* * *

The New Frontier

Talk of adding one million jobs now is "wildly exaggerated," declares a Kennedy adviser. Hard core unemployment will stay high. Uncle Sam will mainly buy more of the same from present suppliers; no great tooling-up job looms. McNamara won't spend new bomber money voted by Congress. Officials so far see no signs of public panic buying in fear of shortages.

But some economists reckon the annual rate of national output in the fourth quarter and later periods may be $5 billion higher than it otherwise would have been, and predict unemployment could fall below 5% next year. Fatter payrolls at some defense plants will boost personal income, retail sales, they predict. California's missile-aircraft industry, Dixie textile plants will benefit. Shelving of plans to close four air bases aids Southern towns.

Defense contractors expect only modest aircraft orders. They reckon warehouses can supply most materials and parts off the shelf. Industry men foresee no net job boost in the Los Angeles area. . . . Wall Street Journal, Aug. 4.

(The "Soaring Sixties" look like they might better be called the "Souring Sixties.")

Another Area of Employment To Be Affected

Automated stores draw interest, says IBM. Customers in Throckmorton's hardware store in Dayton, Ohio, pick up IBM cards next to items they want and take cards to a cashier who puts them through an IBM machine. This prints an invoice in triplicate. One copy is sped through a pneumatic tube to the stockroom where employees on roller skates fill orders and deliver purchases to pickup windows. The store claims the system halves labor costs, cuts shoplifting. In Toronto, Canadian Tire claims its IBM-run store fills the average order in two minutes. The company says customers like automated shopping but it complains machine rentals are too high and machines make errors. . . . Wall Street Journal, July 27.

* * *

Supermarkets Increase

The number of supermarkets has doubled in the last eight years, to around 24,000 in 1960. Since the nation's population hasn't grown anywhere near as fast, the average market for each of the big stores has dwindled to 2,190 families in 1960, from 3,014 a decade earlier. And families served are not raising their food spending fast enough to keep the market expanding for all the stores. According to one trade association, the average American household spent slightly less than $20.10 a week for food last year, only 20 cents more than in 1952.

In the best years, the most efficient supermarket chains rarely keep much more than two cents profit out of each dollar coming in through the cash register. Last year, the nation's 10 biggest food chains earned an average of only 1.22 cents profit on each dollar of sales, down from 1.26 cents in 1959.

* * *

The National Budget

This year's red-ink tide could swell as high as $7 billion, instead of the $5.3 billion now forecast, some observers believe. Revenue estimates seem

optimistic; Congressional experts sight a take less than Kennedy does. The deficit could climb at least $7 billion more if Congress gets free-handed. A big postal rate rise still looks doubtful.

Kennedy will likely have to strain for a budget balance next year. Spending threatens to pass the $90 billion mark; Kennedy shows no sign of trimming civilian outlays. Dillon talks of revenues around $90 billion, $8 billion above this year's freshly-raised estimate. But he's betting on a fat 8% increase in national output, the biggest gain in years.

Kennedy's forecasters insist present optimism is well-founded. Some figure the economic spurt will push national production in 1961's last quarter well above the $530 billion annual rate now predicted. . . . Wall Street Journal, July 28.

(Each time we have national elections the opposing parties promise to live within our means, and each time after election the promise is not fulfilled. Balance in a Price System is ephemeral. You cannot equate "Horses and Apples." Only a functional system in which the numerator and the denominator of the equation are the same can a balance be achieved. Units of energy are such like quantities and are measurable. It's a technological problem.)

* * *

Bookkeeping!

Assets: New York (UPI), Aug. 28, The total financial assets of individual Americans is one trillion dollars, Fortune Magazine reported.

The figure has grown 2½ times since 1945, the magazine said in its September issue. The figure covers such items as financial assets of partnerships, proprietorships, trust funds and nonprofit institutions, but not non-financial assets like cars, jewelry and homes.

Liabilities: Long Beach Independent. Washington (AP). June 28. The U. S. government, having talked in terms of millions of dollars for years, then billions, brought up a "trillion" Tuesday.

Slightly over a trillion dollars is the total debt of people, corporations and governments in the United States, according to Secretary of the Treasury Douglas Dillon.

It includes $69 billion in state and local debts, $358 billion for corporations, $286 billion for individuals and about $290 billion for the federal government.

When Dillon explained this to the Senate Finance Committee Senator John J. Williams, R-Del., suggested he might be complimented for being the first Treasury head to bring a trillion-dollar debt to the committee's attention.

Dillon asked for and received the committee's approval to raise the ceiling on the national debt temporarily to $298 billion. This is $13 billion above the permanent ceiling and $5 billion above the temporary ceiling under which the government has operated in the fiscal year that ends Friday night.

(By any bookkeeping standards we are bankrupt, the only thing is that the creditors haven't demanded liquidation and appointed a receiver.)

* * *

Another "Gimmick"

Wall Street Journal, Sept. 15. Atlanta — Citizens & Southern National Bank is introducing a new plan Monday to permit holders of the bank's credit cards to save now, pay later.

The bank said it will make automatic monthly deposits of $10 or more in savings accounts of card holders who so authorize.

The amount of the deposit will be charged to a card holder's charge account along with other charges resulting from the use of the bank credit card. He reimburses the bank for the savings deposit when he receives his regular monthly account statement.

C. & S. Credit Cards currently permit holders to make purchases at some 2500 stores and professional establishments in eight cities in Georgia. In 1959, the bank initiated a credit card system called "instant money" which permits holders to borrow money quickly from the bank simply by presenting their credit cards.

The bank said the savings account would draw regular interest under the new plan and there would be no charge for having the deposits charged to the credit account.

* * *

How to Cut Expenses!

Toronto Globe and Mail, Aug. 21 (AP) — The U. S. Defense Department authorized the military services today to hire 10,000 civilian workers as part of the new defense buildup. This will increase the military's non-uniformed manpower ceilings to 1,050,000 from 1,040,000.

The action supplements President John F. Kennedy's request to add 133,000 to the regular military forces, and for authority to call up 250,000 reserves.

Automation Invades the Southwest

The extension of automation in Southern California is going on at such a dizzy pace that no one can measure it and few understand it.

So far, there have not been many of the major miracles predicted for this latest epoch in the industrial and technological revolution, but they are on the way.

Most of the automation in this region has been piece-meal. Small parts of complex office and factory operations have been brought under the control of magnetic tape and computer. Each month, however, the machine is extending its work, controlling bigger and more complex operations.

With automation has come unemployment.

It has hurt the unskilled factory worker and office clerk the most. The day is not far off when it may make many top executives unnecessary. It has also created jobs, and preserved jobs.

Economists and industrial relations experts emphasize that automation is, in a sense, not new, and that it is basically just a continuation of the technological advances that began 7,000 years ago when man made a science of agriculture.

Automation's birth can be dated to invention of the clock in the 13th century. Development of the dial telephone in the 1920's moved it a step farther. And the electronics of the post-war years brought it to its present, almost limitless potential.

Mechanization has been directed historically to taking a burden off man's back. This has caused unemployment — the plow and then the tractor drove millions from farms to cities; the cotton gin and the mechanical loom sent millions seeking other jobs; each step, from typewriter to adding machine to computer, has displaced people directly, although creating new jobs indirectly.

Automation goes beyond the advances of past technology. It not only makes the tasks of man easier. It replaces man. The machine takes over a complete and continuing process.

The Standard Oil Co. is installing IBM equipment at its El Segundo fluid catalytic cracker that will make it possible to "close the loop" — magic phrase in automation. That means that the circuit will be complete without personnel — entirely automatic.

Occidental Life Insurance Co., a pioneer in electronic office machine operations, has purchased yet another system, a $1.7 million IBM system which will permit automatic processing of most phases of the business with little more than half the present number of employees.

Douglas Aircraft Co. makes parts for its DC-8 jet transport with tape-operated milling machines. Complex profiles of parts are interpreted by an electronic profile machine, taking minutes to do a job that once took days.

Several banks not only sort checks automatically but consolidate most billing and bookkeeping operations in regional computer centers which eventually will print monthly statements automatically.

At the Chrysler assembly plant, tires are inflated and wheels mounted on new cars without a touch of a human hand.

The Ramo-Wooldridge Division of Thompson Ramo Wooldridge is experimenting with a machine that already has translated more than 100,000 words of Russian into English. Another machine is being built to scan stereographic aerial photos and automatically sketch contour maps.

So it goes — in rendering the factory and office automatic, in extending the minds and capabilities of management and engineers and scientists through "intellectronics."

"The push button factory may be a long way off, but I can see the day when a complex business operation can be run by a single executive and a small staff to program their computer," an industrial relations expert commented.

Automation has more to it than the "gee whiz" of inventive wonders and the impact on employment. As the latest evidence of the influence of technology on humanity, it raises profound questions touching the entire economy, if not society.

Labor Secretary Goldberg has promised an investigation.

Gov. Brown has appointed a commission to study the problems of San Diego County, caught in an economic squeeze compounded and confused by changing markets for aircraft and missiles but including the impact of automation.

Management often drops its voice and always speaks with caution when the subject comes up.

Labor leaders are fighting for protection for workers in industry as layoffs increase.

In offices, there are few layoffs but the rapid turn-over of young people in this work enables management to reduce payrolls without firing simply by not replacing employees who leave.

There are many views on the subject.

"Automation is substantially responsible for the fact that today our workers own countless conveniences which a few decades ago were only to be enjoyed by the rich," H. C. McClellan, president of the Los Angeles Chamber of Commerce, said.

Increased efficiency and productivity are essential to enable the United States to compete in world markets and make available goods "at low enough cost to permit our own citizens to share broadly in the output of our work force," McClellan added.

"This push button business is a lot of hokum," said the director of a large chemical plant, which is almost completely instrumented if not entirely automated.

"People are scared to death over nothing," he added, but he requested that his name not be used.

"Automation?" said C. R. Leslie, general counsel for the Merchants and Manufacturers Assn. "That's a subject like the weather."

A leader in the field of "intellectronics" sees automation in a different way.

"We are seeking to liberate the human intellect so that it can do the things no machine can do," Dr. John M. Salzer, an executive of Thompson Ramo Wooldridge said.

"Through 'intellectronics' man is freed from repetitive and routine chores to apply his creativity, experience, judgment and intuition," he added.

Labor leaders said they are not trying to block automation but most of them are seeking protection for displaced workers.

Protection includes severance pay, extra unemployment benefits, shorter work weeks and, although not admitted, a share of featherbedding.

"We've got to automate like mad to keep our economy expanding," according to Cass Alvin of the United Steelworkers, a union which has encouraged re-training of junior members being displaced by automation.

Technological advances have cut deeply into the clay products industry, according to Paul Pelfrey, international vice president of the United Brick and Clay Workers of America.

"Up until this time we have done very little about it except to push for a shorter work week," he said. The union is looking at other remedies, also, including longer vacations.

Charles E. Bioletti, regional director of the United Auto Workers, sums up the union viewpoint with a story about his boss, Walter Reuther.

Reuther was being directed to a new automated engine block operation in an eastern plant.

"How are you going to organize these machines into your union?" a company executive jokingly asked the union leader.

"How are you going to sell them your cars?" Reuther replied.

And so the subjective reactions go — subjective because no one can take an objective look at the problem in this area — not the M and M, not the Chamber, not the unions, not even the State Department of Employment.

They can only generalize.

No one opposes the sweep of mechanization, but many wonder whether man controls the machine or the machine controls the man.

No one doubts the advantages of automation, or even the necessity. The telephone company could not serve the nation today, even if it hired every high school graduate each year, without the dial telephone.

But the implications of automation — dishwasher, digital computer, automatic bowling alley — are not comprehended by most people.

The economy simply is not expanding fast enough to absorb the workers of an expanding population and the men and women displaced by the machine.

"Improved technology as a whole has contributed significantly to unemployment," it is emphasized by Dr. Irving Bernstein, Associate Director of the Institute of Industrial Relations at UCLA.

The nation is faced not only with a permanent group of unemployed but a growing group of unemployed.

"Economists agree that it will be hard to get below an unemployment figure of about 3%," according to Dr. Alan R. Sweezy, professor of economics at Caltech.

Both he and Dr. Bernstein agree that the effects of automation are the same as the effects over many years of technological advances.

"This is something that goes on all the time,

but that doesn't mean it is not a problem," Dr. Sweezy said.

The big problem facing the nation now is how to expand its economy at a rate that will take the sting out of automation and take care of the population increases. It is that very problem that echoed in the Presidential election.

President Kennedy and many of the economists closest to him argued that the expansion must include increased activity in the so-called public sector which covers such things as education, recreation, development of natural resources.

Former Vice President Nixon countered with an argument that the best way to promote economic growth was to concentrate on incentives to the private sector — the sector of privately held manufacturing operations and service industries.

This debate only touches a portion of the problem, it is indicated by another study now underway at the Fund for the Republic's Center for the Study of Democratic Institutions in Santa Barbara.

At the center, a team of experts from many specialties has been studying the impact of automation and all of technology on modern life.

"No one feels that we should turn back the clock," it was stated by Hallock Hoffman, secretary and treasurer of the center. "We are concerned about finding some way to bring the technological advances under humane direction."

Discussions have developed divergent views, but a thread of agreement has pointed to the need for a solution of the problem through law.

"Many of us are becoming convinced that technology can be directed to the common good only through law," Hoffman said.

An example of a legal application is education. Some of the participants in the center study feel that there is a need for additional public education at the adult level to assist in the re-education and relocation of persons affected by automation and other applications of technology.

"This would seem a more intelligent solution than keeping people on the farm and paying them not to grow anything," Hoffman said.

"Great changes are taking place in the economy," he added. "What we need is recognition of the major facts of life in law."

The results of automation which the center is concerned about include "persistent unemployment which would appear to be permanent," indications that "about one-third of the nation's work force is under-employed or featherbedding," and growing evidence that all this is taking place without planning or apprehension.

Automation apparently has assured American industry a competitive role in the markets of the world.

It is part of a technological influence, however, that could unbalance the American economy if it is not planned and directed with the genius of man which no computer can duplicate.

L. A. Times, Louis Fleming, May 28.

Congressional Record, Aug. 30—The farmer's share of a loaf of bread has decreased from 25 to 14 per cent during the last decade, while the price of bread has increased from 13.5 cents per pound to 20.3 cents.

The baker wholesaler's share has gone up from 44 to 59 per cent, the retailer's has remained the same at 17 per cent and the miller's has decreased from 5 to 3 per cent.

* * *

California Farmer, Oct. 21. — Despite smallest planted acreage in half century, U. S. crop production for this year is still estimated well above the level for 1957 and earlier years . . . harvested acreage now in prospect totals 295 million acres, says USDA, 20 million acres less than last year and lowest of record dating back to 1909.

(Political palliatives offered farmers has simply spurred them to retire unproductive acres, increase fertilizer, plant closer and raise more.)

The U. S. News and World Report carried the following bit of information:

"A $15,000 house bought with $600 down, balance on 40-year FHA insured mortgage. Monthly payment: $77.84. After 25 years mortgage reduced to $8,925. Value of house after 25 years depreciation, $9,042 (no allowance for further inflation in real estate values). Buyer's equity at end of 25 years: $117.

"After 40-year mortgage paid off, value of house $5,467. Total cost to buyer: $37,003 including $15,000 for the house, $20,093 for interest, $1,910 for FHA insurance on the mortgage.

Renewal Notice

Please renew your subscription when you ore notified by CHQ of the expirotion dote.

Need New System for Distributing Wealth

Winnipeg Free Press, Oct. 30—"Chronic unemployment is here to stay, and it is going to grow," Dr. Bernard J. Muller-Thym told a conference sponsored by the Columbia University Graduate School of Business and the Institute of Life Insurance this month.

To this uncomforting thought he added the suggestion that some new system besides wages and salaries will have to be found for distributing wealth.

Dr. Muller-Thym is not a man whose words can be taken lightly. He is professor of industrial management at the Massachusetts Institute of Technology. He was speaking to leading social scientists from 31 colleges and universities and top executives from the life insurance business.

Dr. Muller-Thym said a new system for distributing wealth will have to be found because machines are replacing men to a great extent.

"The shifts in skills required to produce wealth is going to be greater than any retraining of workers or other palliatives can solve." he warned.

He added that to find a parallel for the technological revolution now underway "we would have to go back 5,000 to 10,000 years to the beginning of the neolithic age, when man stopped roving and began to live in one place, when he invented the wheel, when agriculture began. and when he first conceived the idea of property and ownership."

Man, he said, is roving again — this time the universe. "The wheel is becoming obsolete. Agriculture is on the decline. And property in the conventional sense, is disappearing."

He pointed out that never before was there a time when there was so much wealth, nor when wealth was so widely held. "Yet," he added, "no one in other countries and other ages has actually owned less than we do. For instance, the value of our car begins to disappear the moment we buy it. And in the old days, if we owned a house, we lived in it all our life and then passed it on to our heirs. But today the average person lives in a house only about five years. The house is going the way of the automobile.

"If we buy a computing machine today, what we're really buying is not the machine itself but the competence to manage a business with electronic technology. In our economy, the importance of the thing itself is constantly dropping and the importance of competence is constantly rising.

"Invention is no longer the function of sporadic genius. Today we just decided what we need and then invent it. In this sense, we are now in command of nature for the first time."

Dr. Muller-Thym pointed out that the ways in which we are now organizing work are a direct reversal of the ways that were prominent until the past decade. "Today a fair percentage of all work can be done by machines — including the automation of information as well as physical work."

When it came to suggesting a system to replace the present wages and salaries method of distributing wealth, Dr. Muller-Thym was as baffled as the rest of us. "I once thought that common stocks were the answer," he admitted, "but they are not, because they have become increasingly divorced from what was supposed to give them value — company earnings. They have become a commodity in themselves — a medium of exchange, a mere chip in a gambling game.

(Like so many others, steeped in Price System methods, who see the problem, Dr. Muller-Thym has succeeded in painting himslf into a corner. Technocracy has for the past thirty years been aware of the problem and its solution. It only needs the implementation of the people of North America. Investigate Technocracy's answer.)

Those Days Are Gone

(Continued from Page 2)

forget the nineteenth century way rather than being hauled into the Twentieth Century under protest?

Recognize, if you can, that the problems we face in this present time are not insoluble. Isn't it strange that such things as our ability to produce an abundance of food stuff and all the things that make our life now so easy are considered catastrophes? They are considered thus simply because we are trying to fit them into an old nineteenth century framework. We insist that even when all the methods of producing goods have changed that we have to go on distributing them in the same old framework we grew up with.

All the old ways were predicated on scarcity and human toil. Today's conditions are exactly reversed. We in America are faced with abundance and the production of goods by the use of energy other than the human being. Surely it does not take too great an effort to concede that if we can not distribute the products of abundance on the basis of man-hours worked, then some other device must be used. If we cannot find ways to absorb our youth into the scheme of things then some other method to do this must be conceived.

Technocracy, so far, is the only organization which has explored these problems and come up with any logical answers. A study of these answers should convince any thinking person that here is the solution. Why don't you investigate?

—L. M. Proctor

CONTINUED FROM PAGE 10—

in Ghana. Owens-Corning Fiberglass reportedly will build a plant in the Transvaal. Armco International is going into a joint venture in Chile.

Of particular significance to business and labor at home is the fact that the bulk of the new U. S. investment abroad is in highly modern plants in fields where our domestic industry has held undisputed lead — chemicals and drugs, machinery and machine tools, metals, automobiles and trucks.

(Exporting of capital and know-how in search of profits has demonstrated that big business knows no national boundaries. Patriotism is for the average homo-sap. This process will effectively shut off American foreign trade which has been a safety-valve used to maintain the price structure.)

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF THE TECHNOCRAT, published quarterly at Los Angeles, California, for October 1, 1961.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Managing Board, 8113 S. Vermont Ave., L.A. 44, Calif; Editor, Leland Proctor, 8113 S. Vermont Ave., L.A. 44, Calif., Managing Editor, none; Business Manager, Marjorie T. Clouse, 8113 S. Vermont Ave., L.A. 44, Calif.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Managing Board, 8113 S. Vermont Ave., Los Angeles 44, Calif., which is a unit of Technocracy Inc., CHQ, Rushland, Pennsylvania, a non-profit membership, educational organization with no stock or stockholders. The officers of the Managing Board are: Leland Proctor, Editor; Richard Burnett, Assistant Editor; Kenneth Wolford, Research Editor; Maysie Foster, Circulation Manager and Marjorie T. Clouse, Business Manager and Chairman, all with addresses at 8113 S. Vermont Ave., Los Angeles 44, Calif.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 2800.

Marjorie T. Clouse
(Signature of Business Manager)

Sworn to and subscribed before me this 5th day of October, 1961.

Agnes L. Hart
Notary Public in and for said County

(SEAL)

(My commission expires June 22, 1962.)

COVER

WALL PANEL constructed of concrete block using Raybestos Threadline Mortar The panel was lifted, subsequently laid down, picked up, and jostled by the crane's boom, trying to break the wall joints. The wall held successfully, demonstrating the wall strength possible using this new product. An identical panel, constructed with ordinary mortar, was destroyed with a slight jolt of the cranes' boom. Even with proper core, the ordinary panel could not be transported any distance as the movement of the crane boom and uneven ground caused panel joints to separate.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or associaton either in North America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are $9.00 which are paid by the member to his local Section. Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol sgnifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers, and economists that became known in 1920 as the Technical Alliance — a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every State and in every province in Canada, and in addition there are members in Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHO?

Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher, or housewife — so long as you are a patriotic North American — you are welcome in Technocracy.

The TECHNOCRAT

Offering to the American public a medium by which it can learn the facts regarding the transition period in which we are moving toward a New America of technological abundance.

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December, 1961 Whole No. 200

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For security in America — for a world peace which only an integrated technological operation of this Continent could maintain, for the building of a new civilization which shall be an example to all the world, let us keep America in peace and set about the guiding of North America to its technological destiny of abundance as one nation and one people.

—Howard Scott

— SECTION STAMP —

The TECHNOCRAT

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IN THIS ISSUE:

- Symbols in the Mind
- White Collar Automation
- Agriculture—Then and Now
- Operation Everett
- Mental Blocks
- The Nation's Water Problem
- Water — Precious and Polluted
- Unemployment a Mark of Progress?

NEWS MAGAZINE

Whole No. 201

25 CENTS

The TECHNOCRAT

MARCH, 1962

Editorial

Mental Blocks

As our lives become more complicated and our society more complex it behooves us to have our thinking processes lined up with reality.

Quite often we are bombarded by more or less prominent individuals with what they attempt to purvey as some great new, dynamic solution to a major problem facing the country which is guaranteed to provide a lasting cure. Yet, any half bright school boy could punch holes in the whole proposition. If these same prominent individuals would use the same approach that a scientist or engineer uses in solving a problem in the physical world, their inconsistencies would be apparent, even to themselves.

Just recently, the head of one of our great Universities declared that the time had not come for shorter work weeks. That there were too many unfilled needs and that these must be met by greater productivity and greater employment.

Now both of these statements have an element of truth in them but the solution to the problem of employment and production lies at the other end of the spectrum—Distribution.

Too many people have lost the idea, if they ever knew it, of what any economic system is supposed to do. Briefly, it is to produce and distribute goods and services on a more or less equitable basis to the people under that system.

In our case, if it were possible to distribute goods and services up to the capacity of the populace to consume the problem of employment would be less critical. Our economic system of distribution was based upon man hours of work and hand tool methods of production, and scarcity. Within the memory of people still living the entire structure of our society has changed, for now we no longer have scarcity and at an accelerating rate we are producing goods and services without the labor of the human being.

It is easy to say that the way to cure unemployment is to create jobs, lots of jobs, and our political, financial and military leaders have grasped this idea so that now we have grafted on to our economic system a war economy. This program makes jobs but does not minister to the needs of the people. It does provide a seemingly inexhaustible market for the products of the machines.

To a logically thinking person, there is no solution for this problem under a Price System operation and only the removal of a serious mental block, unhampered by any preconceived ideas, makes a solution possible. Certainly it is time for a shorter work week, less production for waste and more people receiving more income—but not in a Price System.

Again the heads of our labor unions stress the idea that as people are thrown out of work by automation, a retraining of these workers will provide a solution. It has been noted by them that the greatest proportion of unemployment occurs among the unskilled. They thereupon jump to the conclusion that retraining of these unskilled is the answer. Only the most elementary thought is necessary to show the fallaciousness of this reasoning.

The unskilled are usually also uneducated, and if a person has reached adulthood unskilled and uneducated under the incentives of this Price System their ability to be retrained is, to say the least, highly problematical. Also, in the light of

(Continued on Page 26)

March, 1962

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Whole No. 201

Symbols In the Mind

It is man's capacity to make complex associations of symbols in the mind that most distinguishes the intelligence of man from that of other animals.

The human brain, particularly the functioning of it which we may call the mind, is a unique phenomenon in nature — and possibly in the universe. It is the end product of over two billion years of organic evolution, during less than one-half of one per cent of which time — some ten million years — it has had humanoid characteristics. Even though the vertebrate brain can be traced back a half billion years and the mammalian-type brain goes back at least a third that far, a brain capable of a high order of reflective intelligence is very recent.

There is no authentic reason for assuming that the best human brains of today are any farther advanced than the best human brains of fifty or a hundred thousand years ago. Yet, the best brains of today are far more capable in their achievements than similar brains of past millenia. This is due, not to physiological improvements in the brain, but, to external aids to its function which have been improvised, mostly over the past ten thousand years. Of these aids, the means of recording data probably is the most significant.

With knowledge now available to man, it is possible to speculate on the probability that other occurrences of similar intelligence — similar brains —have evolved in other parts of the universe. For those who delightfully indulge in fantasies of other worlds populated with other man-like creatures, that probability is most discouraging. Even though we may allow for the occurrence of a hundred trillion galaxies in the universe, each equivalent to our own in extent and makeup, then allow for a hundred billion years of time; still, the mathematical probability that another creature similar to man would have evolved anywhere in the universe is virtually nil. Considering the phylogenetic hazards that life on the earth has faced over the past two billion years, the calculable chances that any other form of life could have arisen and developed an intelligence equivalent to that of man or greater is only infinitesmally better than nil.

Proceeding from postulates other than those of science, conclusions quite at variance with those stated above may be arrived at. But we shall deal only with the scientific method and attitude and with the facts which have been revealed by scientific investigation. Within that framework, it is relevant to say that the brain and mind of man is a unique phenomenon in the universe.

The Mechanism of the Nervous System

The brain is part of the nervous system of complex animals. The nervous system arose and developed in the early multicellular animals as a means of coordinating the various parts of the organism. Within the nervous system, the brain evolved as a coordinating center. 'Messages' come into the brain over nerve fibers. In the brain, the 'messages' are 'evaluated' and response directives are sent out over other nerve fibers. Thus, the body is made to respond to stimuli.

In the body are various tissues which are sensitive to particular stimuli; that is, each kind of sensitive tissue is capable of being stimulated by only one kind of irritation. The retina of the eye is sensitive to certain frequencies of radiant energy. Certain tissues in the ear are sensitive to certain frequencies of vibration in the atmosphere. Certain tissues in the tongue and nose are sensitive to certain chemical substances. Certain parts of the skin are sensitive to contact with other objects. Many places in the body are sensitive to heat and cold. Other places, usually deeper in the body, are sensitive to pressure. These stimuli are transmitted to the ends of specialized nerve fibers, which carry impulses to other parts of the body.

Nerves are bundles of insulated fibers which carry impulses from one place to another in the body. The transmission is accomplished by electrochemical means. Once the end of a nerve fiber is stimulated, the impulse passes rapidly along the fiber to the central part of the nerve cell (neuron), thence outward to other nerve endings. When the impulse reaches the far end of the neuron, it may be passed on to another neuron or be extinguished. Before an impulse can pass from one neuron to another, it must 'jump' a short gap, called a 'synapse,' since the fibers do not come in direct contact with each other. Many impulses do not cross the synapse, hence are extinguished; only the more 'intense' impulses get across. The chemical condition of the body-fluid at the synapse determines in large measure the ease or difficulty of the 'jumping' process. Certain chemicals in the fluid interfere with the passage of nerve impulses; these are called narcotics. Other chemicals in the fluid facilitate the passage of impulses; they are called stimulants. Unless stopped at some point along its course, an impulse eventually reaches an effector — a muscle, a gland, or the conscious center of the brain.

An impulse may cause one of three types of responses in the body, depending on which kind of effector it reaches: (1) It may cause a muscle fiber to contract; (2) it may cause a gland to secrete; or (3) it may create a conscious perception in the outer layer of the brain. It is only the last with which we are concerned here.

Perceptions are of many kinds, varying witht the kind of perception cell that is stimulated. A perception is a flash of consciousness or awareness. These perceptions may be in the form of a sensation of light, or a particular color, a sound of certain pitch, a particular odor or taste, a sensation of touch, heat, cold, pressure, or pain.

At birth, most of the perceptions in the human brain are not coordinated. Presumably in the newborn infant, the sense perceptions are very blurred, particularly those of sight and sound. As perceptions are stimulated in certain combinations, they tend to organize into patterns which, after many repetitions, become stabilized. Later, the whole pattern tends to be stimulated as a unit. Thus, a pattern of sounds becomes integrated into a spoken word, or into a melody, or some other objective sound effect. Light and color patterns in the form of designs and pictures are synthesized. Touch perceptions become coordinated into the feel of some particular object.

Once a pattern is formed, it is more easily restimulated as a pattern. In time, after numerous repetitions, it becomes easily stimulated as a unit. In fact, the brain may receive stimuli for only part of the pattern, yet the whole pattern will 'respond.' In the case of rapid reading, one does not 'see' every letter of a word; only a few letters will provide the clue for arousing the pattern of the whole word. This development introduces an element of risk, however; for one may 'think' he sees the word 'Philippine' when the word is actually 'Philistine,' for example. This phenomenon forms the basis for one's seeing or hearing things that are not exactly so.

Development of Memory

The formation of perception patterns in the brain which are capable of easy restimulation constitute what is known as 'memory.' Certain clue stimuli will activate certain pattern sensations, or even whole sequences of patterns. Memory, then, is the restimulation of perception patterns and sequences which have been implanted in the brain. As in a computing machine, nothing can be obtained from the 'memory bank' which was not first placed there.

The mind of man is basically a disorganized function; that is, there are billions of perception cells in the brain which are not organized into patterns at birth. They are capable of being organized into any number of pattern combinations. The brain of an Eskimo, for example, is similar in its potentials at birth to the brain of a Ceylonese; but, since the mind is developed in a different environment, different climate, different language, and a different culture, the end result is quite different.

This disorganization of the brain cells in man permits the widest flexibility in adjustment to environmental factors. It permits the human being to meet and adapt to conditions and changes which would defeat less intelligent creatures. It means also that the patterns which govern one's life must be learned by each individual. This is a relatively new thing in animal evolution. Most animals are governed by patterns which have become fixed, known as instincts. Instincts are transmitted from generation to generation by heredity. Hence, most animals do not have to learn how to get along in the world. The patterns are already organized for them, and all they do is respond automatically to specific stimuli. The instinctive organization in the brain is often very complex. For example, a bird

does not have to learn how to build a nest; the behavior sequence associated with building a nest is already fixed in the brain. Instincts are very efficient in specific situations, but they do not permit adaptive changes to new conditions.

Mammals are changing over from full reliance on instincts to a learned intelligence. Man has progressed farther along this line than any other animal. As a consequence, the human animal has lost almost all his former instincts. In the new born baby, only two instincts are prominent—a sucking motion of the lips and a grasping action of the hands. The rest are reduced to instinct tendencies at most; for example, the baby eventually has an urge to stand up and walk, but most of the detailed motions have to be learned by trial and error experience.

Reflexes and Conditioned Reflexes

A peculiar development of the more complex brain is its ability to associate two or more pattern perceptions. When two patterns are stimulated at about the same time, for example, the sight of a rooster and a crowing sound, the two become associated together in the brain. After several to many repetitions, the stimulus of either pattern will bring into consciousness the other pattern also. Only the sound of crowing at dawn will bring 'to mind' the memory of a rooster as well. Thus, a conditioned reflex has been formed. Later, other patterns may become associated with the rooster, such as a picture of a rooster, a stylized sketch, or a particular kind of footprint. Such associations seem simple and proper; but it is also possible to form associations between two patterns (symbols) which have no intrinsic relationship to each other. The printed word 'rooster' would not in itself suggest the male of the barnyard fowl; but we can learn to associate the two symbols so that, from then on, either symbol will cause the other symbol to appear in the brain also. However, if one is raised where the Spanish language is spoken, that association would not be made; the fowl and the word 'gallo' would be so associated.

Pavlov, a Russian scientist, showed clearly how the association of ideas occurred. His experiments with dogs is classical knowledge and we need not describe them here. Suffice it to say that he demonstrated that two very remote patterns could be associated in the mind of a dog, such as the sight of food and the sound of a bell. Eventually, the mere sound of a bell would cause the dog to salivate the same as he would do at the sight of food.

The capacity to form remote associations reaches its greatest expanse in the human brain, also the capacity to form highly complex associations. Man is capable of forming a series of associations; for example, he may associate a picture of a dog with the animal dog, then he may associate the printed word DOG with the picture, then the spoken word 'dog' with the printed word, then associate the printed word CANIS with the spoken word 'dog.' After all that, he will associate the word CANIS with the domestic dog. It is this capacity to make complex associations of symbols in the mind that most distinguishes the intelligence of man from that of other animals.

The first symbols formed in the mind are essentially pattern reproductions of the stimuli received by the sense organs — the eyes, ears, nose, tongue, hands. But, as sense experiences multiply, the brain tends to simplify its images. Hence, mental pictures tend to become reduced to a few salient features. Eventually, the picture images become reduced to hieroglyphics. So, thereafter, all we have to see are the hieroglyphics and the mind supplies the full picture.

Through continued association of patterns, we build up generalized concepts, tastes, and behavior patterns around the simplified symbols. These symbols become fixed in the nerve cells of our brains, where they serve as guide-posts or points of reference for our thinking, actions, and feelings. In some minds, a Roman Cross becomes fixed as a highly significant symbol; in other minds, it may be the Swastika, a Star and Crescent, a Hammer and Sickle, a Star of David, or a Sunburst that is highly significant. Around such symbols are built up a whole complex of intellectual, emotional, and physical response patterns. This continues to be so even though the things for which the symbol stands may be vague, uncertain, or forgotten, or even if what the symbol stands for has been reversed from what it stood for in the beginning. The symbol alone, divorced from its earlier meaning, will produce a conditioned response.

Danger of Illusions

The mind of man is not a fool-proof function. Not all of the pattern associations formed in the mind result in greater comprehension of the environment and a more useful adjustment to it. Certain chains of association can stray far from the basic patterns built up from sense stimuli, so that the end results bear little or no relationship to reality outside of the mind. The human mind thus

is capable of creating fantasies and illusions, and these may appear to the beholder to be as real as anything in the physical world — yet they exist only as perceptions in the brain. If a person accumulates too many of these illusions, he may become a social problem.

The ancient Greek philosopher, Plato, brought to light the principle of illusions in his Allegory of the Cave, wherein the shadows of the images of things became more real to the inhabitants of the cave than the real things themselves. People tend to hold on to their illusions and remain devoted to them even though it is demonstrated that they are no more than fantasies. Plato was not a scientist and he offered no explanation for the occurrence of such phenomena.

An explanation of how the mind acquires its symbols and associations had to wait for the rise of science and the development of advanced neurology on the one hand and experimental behaviorism on the other. (Unfortunately, psychology evolved more from philosophy than from science, hence, is still cluttered up with philosophical debris.)

The Discipline of Science

Science, technology, and the technical arts provide a discipline for the mind which requires that it maintain a close correlation between the symbols in the mind and the external physical world — at least in those areas where the discipline applies. Within these disciplines, a few individuals, over the past 400 years, have been able to make great progress in man's knowledge of external phenomena and in the adaptation of this knowledge to his use. During this time, mankind has learned how to provide a comfortable, stable livelihood for a greatly expanded population. Man is on the verge of finding ways of traveling beyond his own planet. He is on the verge of learning the secrets of organic heredity and development. He has pretty well mastered the technique of releasing energy in such forms and in sufficient concentrations to destroy all life on earth.

The functions of the senses and the brain have been greatly enhanced with instruments for improved observation and analysis and with means of keeping records. The individual does not need to rely upon his own senses and experiences to get by. He can employ instruments to detect things that are far beyond the reach of his senses; and he can draw upon the accumulated knowledge of the past.

Different individuals vary greatly in their capacity to make associations in their brains, particularly the more complex ones; hence, there is a wide range in the intelligence of individuals. Also, as we grow older, it becomes more difficult to form new associations; so, we tend to think in terms of our past associations of ideas. In a static society and unchanging environment, this is no handicap. Prior to the past century, all societies were static and unchanging (except for exigencies brought on by wars, disasters, and migrations). Now, mankind is faced with rapidly changing environment. The older people now living have witnessed more change than occurred in any thousand-year period of the past. Hence, we are now called upon to make more new and rapid associations in the mind than any generation before us.

Concepts Change Slowly

Our capacity to change the symbols in our minds is exceeded by the speed and extent of the external changes about us. None of us can keep up, even with the relevant changes and new discoveries. Symbols which once seemed to serve us as guideposts no longer work, and we become confused. For example, the symbols which made up the concept of working for a living do not seem to conform with reality anymore, at least not for several million people in the United States. The factors of living have now become so complicated that we can adapt to only a small facet of the whole situation about us. In effect, we become cultural recluses. Groups of people, even in the same city, become culturally isolated from each other. The individuals of each group have organized a distinctive complex of symbols in their minds and find harmony only with others who have similar complexes.

Concepts and tastes may be individual and personal but, more often, they are socialized; that is, they are the concepts and tastes held in esteem by the community — the place and time — where one resides. There are styles of houses, clothing, transportation vehicles, sports, socializing, and manners which are adopted by the majority in any one place and time. Such group tendencies indicate a desire to conform rather than to live as free and unfettered individuals. Living is much simpler that way. The group makes the decisions and sets the patterns or styles — by means which the individual does not recognize or understand, but he goes along as a matter of expediency.

Symbols Can Be Good or Bad

From the group, we learn that certain symbols are good and other symbols are bad. These are not

necessarily the symbols which we would choose as good and bad if we were left on our own, but we tend to go along for the sake of conformity. Actions and things which bring pleasure to us we are inclined to call good, and those actions and things that bring pain we are inclined to call bad. However, the mind is capable of making perverted associations. That which brings pleasure, hence should be called good, may become associated with the symbol 'bad.' Then, instead of being idolized as something good, it may be despised. For example, a certain kind of food, say apricots, may taste very good to you; but, if you are repeatedly informed by your group that the eating of apricots is bad, you will tend eventually to despise apricots and regard them as evil. Certain anti-hedonistic religious cults have come to regard all pleasures as bad and to regard pains and frustrations as good.

A prominent good symbol of the West at this time is Freedom. Certain people become passionate in their espousal of Freedom. In their minds, it is the symbol of that which separates all Good from all Evil. It is regarded as being so vital and so desirable that men would die for it rather than permit it to be endangered. What, then, is Freedom? Is it the right to eat if one is hungry? Is it the right to be clothed against exposure and cold? Is it the right to be protected from danger? Is it the right to medical care in case of sickness? No! It is none of these, for all of these rights may be absent from millions of people who are considered Free. Further, these rights may be present among people who are regarded as not Free, and they may be roundly condemned by Freedom-lovers. No proponent of the Freedom symbol can explain to you what it stands for. He may voice all kinds of opinions about a wide variety of things, such as voting for political party candidates at election time, the right to be insecure, the right to be protected from exposure to indecency, the privilege of faith in a certain superstition; but his blather will be without substance. However, he will assure you that Freedom is more important than life, and he may end up with a 'profound' symbol-slogan, 'Give Me Freedom or Give Me Death!' He may even go so far in his support of Freedom as to send his son to some remote part of the globe to die for Freedom. Still, you won't find out what Freedom is.

Another Good symbol is Democracy. It is useless to try finding out what that symbol stands for, except that in some vague way it is very different from People's Democracy, which is a Bad symbol. Anyway, it is 'very important' that we save Democracy. And what is more, you should be ready to die (or let your son die) to keep it from becoming a People's Democracy.

To some, the color red and the word 'red' are Bad symbols. Through a chain of associations in the mind, the symbol Red will cause some people to go into an emotional frenzy. There have been many cases of objections by 'super-patriots' to the use of red-colored flags as warning signals. We recall listening to a broadcast of a prize fight a few years ago in which the announcer carefully avoided mentioning the word 'red' when describing the color of the blood which flowed rather freely. The blood was 'claret,' 'carmine,' or 'scarlet,' but (heaven forbid!) it was not 'red.'

Importance of Symbols

Symbols in the mind can be very useful when there is a close correlation between the symbol and some object or event in the physical world. But when, through a chain of associations, they lead off into fantasies, they can be very misleading and dangerous. Most symbols in the minds of people are of the latter sort. Science is a modern method of correlating symbols with things that are real in the universe; and, as such, it is a strange new experience for mankind.

Technocracy has its symbols, some of them arbitrary, some of them objective and functional. The Monad Symbol in red and silver is a symbol arbitrarily chosen for purposes of identification. It also signifies dynamic balance in the social operation of an Area, particularly dynamic balance between production and distribution. A certain shade of grey color, along with a certain hue of vermilion as a secondary color, also serves as a symbol of identification. The word TECHNOCRACY is the name symbol for a particular design of social operations and, literally, it signifies skilled governance (government by skill).

The specifications for the design of Technocracy are descriptive terms which refer directly to persons, things, and events. There are no vague, philosophical symbols, such as Freedom, Justice, Virtue, Value. All of Technocracy's terms have objective referrents. The nearest approach to an abstract symbol are the words Abundance and Security. But 'abundance' is definable as a certain quantity of goods and services — the amount required to fulfill the needs and wants of a population. Security is the optimal feasible protection from disease, privation, violence, and harassment.

Technocracy's terms have objective, definable meanings; they are not just symbols in the mind.

If you wish to be only mentally titillated by abstract symbols dealing with unnatural fantasies, undefinable, or definable only in terms of other fantasies, you will find your proper milieu in the Palace of Occult Culture across the street, not in a Study Class of Technocracy Inc. But, if you are at all interested in studying the circumstances, the capabilities, and the probabilities of the social order of your Continent, you have no other place to turn to. Technocracy is unique as a design of social operations; and Technocracy Study Classes are the only reliable source of information on the subject.

—Wilton Ivie

There Ought to be a Law

Dear Senator:

I see where the government is raising the postage rates on letters and other things and I don't think this is fair. We already pay twice as much for sending a letter as we used to and three times as much to send a postcard; and sending parcels through the mail is out of sight. It looks like they are just trying to make it harder for us common people to get by. It is argued that the Post Office Department is losing money so they have to raise the rates. I think this is a silly argument, because the cost of running the government comes out of taxes, and that includes the Post Office, so we ought to get something for our money. Nobody argues that the Department of Agriculture, or Commerce, or Defense, or Education should make a profit. Even Congress doesn't pay its own way. The only one that makes a profit is the Department of Internal Revenue and it doesn't earn what it gets.

I don't see why the government can't go into business and make a profit so it won't have to collect taxes from the people. If the government goes into the business of buying grain, why can't it also go into the business of selling grain too instead of just letting it rot or giving it away? Why does the government always have to do things at a loss (except for the Post Office)?

So, here is what I think you should do. You should pass a law which will require each Department of the Government to set up its own business enterprises and run them for a profit, then spend only as much money as they make, just like in free enterprise. If you do that, then we won't need the Department of Internal Revenue. I never did like that one much anyway. As for Congress, I think it should go into the real estate business and pay its salaries and such out of the rent it collects. I don't see any reason why the government can't pay its own way.

Sincerely yours,
BEETAL BRAYNE

P.S.: The company I work for sends out a lot of advertising in the mail and they tell us that, with the higher postal rates, they can't afford to advertise so much, which means that business will fall off and some of the men will have to be laid off and I might be one of them. Please see if you can do something about it.

Poultry pile-ups in cold storage reach a record high. Nov. 1 stocks totaled 542 million pounds, 126 million pounds above the previous high a month earlier and 18 million pounds above a year earlier. Frozen turkeys accounted for 373 million pounds of the latest total, the most ever. Next biggest heap: 110 million pounds of chicken.

Wall Street Journal 11-21-61

Debt managers skirt trouble. The national debt climbs within $1.3 billion of the $298 billion legal ceiling. Treasury men fear they'll have to borrow anew if December's tax take proves disappointing: bigger debt could force a January request to raise the lid. But officials hope revenues will run high enough to let them squeak by.

Wall Street Journal 11-24-61

Agriculture—Then and Now

If it were possible for our emigrant ancestors of the mid-19th century to retrace their journey today, they could make the entire trip across the Atlantic Ocean and overland in a matter of hours by jet plane. And what a change they would see along the way.

This makes us realize the magnitude of the change that has swept over this country and the entire world in the past century. It seems to gather momentum as it proceeds. We have progressed from hand labor to horse power to kilowatt-hour to atomic energy. What is to be the next step? We hear vague references to cosmic energy as a future source of power.

Backward countries have at last awakened to a realization of their own potentialities. They want self-government and a voice in the councils of the United Nations. They want to handle their own natural resources as they see fit.

All nations have political and economic problems, and are competing in world markets to sell or trade their surplus commodities.

This great industrial and agricultural revolution got under way, with industry in the lead, with the advent of electric motors and gas turbine engines. This naturally sparked the change in our agricultural technology.

From the year 1682 until 1812, plows were made of wood with a small point of iron fastened to the wood with strips of rawhide. They were drawn by oxen, as were the all-wood carts.

When horse power entered the picture, a large amount of farm capital was accumulated in millions of horses and mules, and the machinery, harnesses, and conveyances used with them, also the barns for their shelter and feed.

And here is an important point — inherent in those very animals, horses and cattle, were the obstacles to bringing capacities and methods on the farm up to the capacities and methods of the manufacturing industry. These work animals were more than power for plowing, hauling, and carrying men and goods. To their usefulness was added the feeling of understanding, even affection, between man and his animals. These immediate values and feelings delayed or blunted recognition of the need for more and different power. Men and animals lived together, and were adjusted to the conditions and vagaries of nature. Each young person learned what his father knew. Knowledge of equipment and methods were passed on from generation to generation.

There is no single decade or date to mark the beginning of the technological revolution, but with the development of several new types of horse-drawn machinery in mid-19th century, the agricultural revolution came about, replacing hand labor.

During the Civil War, shortage of laborers and high grain prices speeded up the adoption of machine methods.

At the time of the first World War, the number of horses and mules was the highest in history — more than 25 million. The availability of good new land had dwindled to insignificance. One-fourth of harvested crops were needed to produce feed for these animals. The American economy of today could not possibly be supported by an animal-powered agriculture on our shrinking land base.

With the adoption of mechanical forms of power in engines, tractors and electric motors, and the development of more types of equipment adapted to the use of that power. American agriculture entered a new era of sharply rising productivity. Tractors provided adequate mobile power on the land. Automobiles and trucks reduced barriers of separation and distance. Central station electricity was extended to rural districts, permitting farm families to enjoy more comfortable living, with all sorts of labor-saving devices.

The U. S. Department of Agriculture is now a vast organization, with countless scientists, engineers, machinists, etc. Within it are the service branches, such as Soil Conservation Services. Agricultural Marketing Service, Agricultural Research Service, Federal Extension Service, and so on. There are experiment stations at State Agricultural colleges, where new ideas are tested and help and advice offered to farmers.

At times it seems as though the branches are working at cross purposes. While one branch is

collaborating with the construction of huge dams that will bring thousands of new acres under cultivation, some are developing new and better seed-types that will yield bigger harvests, in categories that are already in surplus supply. Still another group is urging farmers to reduce the acreage planted in corn, cotton and wheat. They want a certain percentage of land idled. Another department may be finding storage space for additional harvests, arranging rent Uncle Sam must pay for storage. The marketing service must try to dispose of the huge surpluses. Other countries are now competing with us in the market places, for they, too have a similar need to get rid of surplus commodities, such as wheat, corn, cotton, tobacco, and beef cattle.

In order to reduce our supplies, we are giving away large amounts to foreign governments for famine relief and other purposes. This year's program is expected to account for one million tons of farm goods valued at $300 million, about 3 times the yearly amount formerly handed out.

Various voluntary relief agencies are being allowed to donate surplus foods and fibers to needy persons in this country and abroad. These donations were expected to approach the value of $255 million this year.

It has been recommended to Secretary Freeman that our barter system be expanded, under which surplus farm goods are traded for strategic materials. At present, barter transactions are arranged solely with countries which lack dollars to pay for imports. We need to sharply increase the amount of commodities swapped. We have even decided to allow some countries to buy our products and pay for them in 20 years, instead of for cash. El Salvador has such an agreement with us, and we expect Venezuela, Austria, Ethiopia, Liberia, Lebanon, and the Federation of Rhodesia and Nyasaland to follow suit.

The efforts of the Agricultulre Department to curtail production sometimes appear futile. For instance, farmers in the Corn Belt were paid $700 million for idling 20 million acres of corn land. The farmers planted better seed on the remaining acres and used more fertilizer. Result, only 10% less corn was produced in 1961 than in 1960.

Wheat harvest was down this year, due to drouth conditions. The same may be said of oats. A 10% wheat acreage reduction is anticipated for 1962.

Soy bean acreage increased 15% from last year. Many farmers are turning to soy beans because of the continuing good demand for them at home and abroad. The price support has gone up to $2.30 per bu. from $1.85 last year.

Mechanization of farms and recent automation as well, have altered the agricultural picture more each year. Large commercial farms, using huge equipment, can handle large tracts of farmland more economically, than can the farmer with fewer acres and smaller equipment. The trend continues toward fewer but larger farms. Due to drouth and other misfortunes, smaller farms are being taken over by more prosperous neighbors. Farms of over 500 acres now account for 9% of the total in the 50 states.

Many extensive dairying, poultry and hog raising businesses have sprung into being since automation was introduced. With the proper equipment and building arrangements, the feeding, watering, and other tasks are performed with a minimum of human labor. Efficiency is the watchword, and evidently it pays off.

Machines are being constructed now for harvesting tomatoes, fruits, nuts, and other crops formerly harvested by hand. The Agricultural Department, working through State Universities, plans and constructs prototypes of machines designed for specific tasks. When tested and corrected, the designs are released to small manufacturing concerns who construct additional machines for the market. In the case of tomatoes, only certain types can be harvested mechanically, but new varieties are being developed that will ripen uniformly and can be handled with less bruising. In California this year, about 3000 acres of the pear-shaped tomatoes were harvested mechanically, plus 200 acres of a new type tomato, the VF145. The industry hopes to have about 100 machines in the tomato fields in 1962. These machines harvested approximately 100 tons of tomatoes per ten-hour day at a cost of between $5 and $7 per ton. Compare this with $10-$11 per ton for hand picked harvest.

This means a serious drop in the demand for laborers, who have previously found employment during harvest time. It is expected that the labor force will shrink from 50,000 to 10,000 in the next few years. Spurred by the AFL-CIO campaign to organize field-hands, California's "specialty crop" growers are encouraging development of those machines that will help them beat rising labor costs. Equally important, work is being stepped up to breed more fruits and vegetables that will withstand machine handling. It is esti-

mated that one machine harvesting 2000 tons of tomatoes will save a $16,000 wage bill. The first machines cost $15,000 each. However, many growers believe the biggest advantage mechanization will bring is freedom from dependence upon a large transient work force to harvest their crops. Strikes of even a few days duration at harvest time can work irreparable damage to perishable crops. More skilled laborers will be needed, to drive and service the equipment and sort the fruit. Twelve workers, 2 drivers and 10 sorters, can do the work of 60 field hands.

Two types of machines, capable of doing the work of 5 to 7 men, have been demonstrated to harvest tree fruits and nuts. Both are mounted on canvas catching frames, which provide a soft landing for the crops. One is a sort of huge pea-shooter, positioned about halfway up the tree trunk. A 5-lb. slug is fired at the tree and the impact loosens the fruit or nuts. The other machine has a long boom which is clamped onto the tree and vibrated to shake the fruit loose. The type of fruit determines whether the knocker or shaker is used. These machines have already been used in some almond, walnut and prune orchards. They were tried this year on peach, apricot and cherry trees, and will later be tested in harvest of apples, oranges, figs, olives and pears.

Farm magazines illustrate an interesting array of machinery for every possible use.

As for the small family farm, this technological revolution has hardly reached them. They can't afford to buy the marvelous new machinery. They get little or no benefit from government price supports because they have little to sell. Their crop acreage is reduced at the same percentage as the larger farms, a cut they can scarcely afford to take.

A director of the agricultural economics division of the Marketing Service writes in the 1960 yearbook of the Department of Agriculture. In commenting on our farm surpluses, he states: "To avoid unwanted surpluses, we need more timely, more detailed statistics, and information to distribute among farmers and the food trades. We need careful and realistic adjustments in price support levels.

"We need even more to develop more effective ways of making our surpluses available to those who need them at home and abroad.

"Such a program will not weaken Free Enterprise. It will supplement and strengthen the ordinary forces of the market. A free market doesn't mean the absence of Government. It requires active assistance from the Government.

"The program of the future doubtless will continue to be some combination of programs aimed at adjusting production, expanding markets, and strengthening the bargaining power of farmers."

As long as we have to live under an obsolete economic system that was born in scarcity and dedicated to waste, all attempts to make it work in an economy of plenty will prove futile. This splendid industrial and agricultural revolution is showing signs of bogging down. It has learned to produce, but it hasn't found the key to distribution. We rather think he suspects something is missing, for he says further, "Our basic trouble is not that production and marketing are too efficient. Rather it is that our SOCIAL ENGINEERING HAS NOT KEPT PACE WITH OUR PHYSICAL AND BIOLOGICAL ENGINEERING. We know better how to manage machines and cows than to deal with people. Our programs, vital as they are, may sometimes foster overproduction, and some times may HOLD DOWN CONSUMPTION. These unintended results are SIGNS OF POOR SOCIAL ENGINEERING."

We appreciate the work of the Department in its tireless efforts to do what needed to be done to advance agriculture to such a high level of attainment. It has also unwittingly demonstrated the fact that Technocrats have long asserted—that within the framework of the Price System, there is no solution to the problems of inadequate distribution.

We suggest that everyone investigate Technocracy and learn how and why a government can operate more sanely and efficiently without the use of a single price tag. Let us say goodbye to the past and its false gods, and forge ahead to attain the kind of society more befitting our scientific know-how.

—Henriette Phillips

Omission of Credit . . . "War and Peace and the Problem of Berlin" by Fred Warner Neal, which appeared in the December issue of the *Technocrat*, was a convocation address given by the author at Claremont Graduate School.

Operation Everett

The major Technocratic Activity in the Pacific Northwest this spring is a two day function at Everett, Washington, later this month. This activity, labeled Operation Everett, will occur March 24 and 25, when Technocrats and their Official Gray Cars will converge upon Everett to disseminate information on Technocracy, to symbolize and to stage a large public meeting with a Technocracy speaker.

Sponsored by Section 1, R. D. 12247, the activity is being planned and carried out with the joint efforts of the Western Washington Area and Southwestern B. C. Sections. The central purpose of this activity is to make the community aware of Technocracy and to get factual information to the public.

A broad and penetrating publicity program will reach the entire Everett area and surrounding communities. It is anticipated that TV advertising will be used in addition to newspaper and radio advertising. Another basic feature of advertising the public meeting will be a house to house distribution of meeting notices.

The combined Area Grey Fleets of Southwestern B. C. and Western Washington will be on

parade Saturday and Sunday to aid publicity of the public meeting Sunday afternoon.

Plans are to arrange with Continental Headquarters one of the Chief's stimulating telephone interviews during the Membership Meeting Saturday evening.

A full report on Operation Everett will appear in the July issue of the Northwest Technocrat Magazine.

The Traffic Headache

So many new cars are being added to the highways each year that "the moment of complete immobility is not far off and the parking problem will be solved forever."

That was the conclusion of two Western Michigan University Professors, J. C. Owen and C. A. Smith, in a joint paper presented last night to the Society of Automotive Engineers.

Owen and Smith said the "crisis in metropolitan transportation today threatens the continued existence of the American city as we know it."

They blamed it on metropolitan mass transit (a "sick industry") and too many cars on the road ("Americans love their automobiles").

Building more expressways, even electronic ones, is not the solution, they said. Since there are no plans to dispose of the car when it reaches a city the motorist "will merely arrive more deftly and speedily at the point of ultimate chaos," they said.

Owen and Smith suggested, instead, that every metropolitan area create a central agency equipped with data, money and authority to make and implement plans dealing with all forms of transportation —public, private and pedestrian.

"Something really new" in the way of mass transit should be found. It might take the form of an aerodynamic monorail, a captive plane, which would offer speeds superior to anything attainable upon a freeway plus the glamor and the symbolism of the air age."

Another method of solving mass transit problems might be powerful helicopters capable of picking up a bus loaded with passengers and depositing the vehicle in the heart of a downtown area, according to a government official.

Comment: Every city in the country is faced with the traffic and parking problem and still the car manufacturers are urging two or three cars to the family. Inhibited by Price System Thinking no one seems able to conceive of an obvious solution such as a national U-Drive-It system.

RESEARCH BULLETIN

Independent, Long Beach, Dec. 8, 1961

Federal spokesmen are cautiously enthusiastic over a proposal to finance a year's free city bus service in Ithaca, N. Y., with federal funds as an experiment in solving the nation's growing urban traffic problems.

The experiment—if approved—might determine whether there is a "psychological obstacle" to people riding buses, said a spokesman in the office of transportation. But he wasn't sure just what could be done with such information.

The experiment would cost federal taxpayers an estimated $100,000 or more.

"What we want to do is slowly, carefully, laboriously see if Ithaca has an idea that might be useful," said the information spokesman, Charles M. Smith.

The Ithaca Common Council is asking something over $100,000 to put the free bus service into effect for a year. The free riders would be carried in four new buses paid for by the city.

The idea didn't sit well with Sen Frank J. Lausche, D-Ohio, who fired off a letter to John C. Kohl, administrator of the brand new transportation office set up by Housing Administrator Robert C. Weaver.

Smith said Wednesday Kohl hadn't received Lausche's letter yet, but Kohl recently called Ithaca's proposal "among the more intriguing projects" proposed under the 1961 Housing Act. Congress provided about $50 million in the act to seek solutions to urban transportation problems.

Kohl, who calls such problems "traffic disease" and "softening urban arteries," said in a recent speech that the Ithaca experiment could "certainly prove, or disprove, the often-heard assertion: 'Even if you give free service, nobody would ride transit.' If that alone could be settled, transportation planners would have a more definite and valuable guide for their work."

Lausche said he was "shocked" by the Ithaca proposal, one of about a dozen requests for grants but the only one suggesting free rides.

Other requests for grants include Detroit's proposal to set up a 25-mile monorail test line, San Francisco's request for funds to install part of a new rapid transit system, and the proposal of Newark, N. J., to pave a subway line to be converted to bus use.

Philadelphia, Los Angeles, Cleveland and Atlanta have also put in bids for funds in unspecified amounts to seek transit solutions.

Comments: Ithaca's experiment undoubtedly will fail because it is on such a limited scale. Should the plan be on a city-wide basis with adequate service to all parts of the city, it would make Ithaca a show place.

Distribution?

Co-Operative Consumer, 11-3-61

There is not much stir among consumers over a rise in the price of such items as fur coats or cigarettes or jewelry. Many people simply don't buy these. But when the price of bread is raised for the flimsiest of reasons everyone is effected—most of all the poor. Profiteering in so important a food item, calls for vigorous protest and a demand for investigation.

Recently the Lakehead price of wheat advanced five cents a bushel, following the devaluation of the Canadian dollar. Immediately a bakery spokesman in Toronto announced that the price of bread would have to be increased at least a cent a loaf. Since then bread has gone up a cent and, in some places, two cents a loaf across Canada.

When Finance Minister Fleming told bakery spokesmen in the House that a raise of one cent a loaf to cover a five cent a bushel increase was more than a little ridiculous, they quickly thought of other expenses. The one-cent boost, they insisted, would barely keep them in business.

According to an editorial in *The Western Producer*, the small increase works out to less than one-eight of a cent a loaf. To show what the extra seven-eighths of a cent, or even more, means in profit to the baker it cites a case from an analysis

made in Vancouver, following a two-cent bread price increase.

A large bakery claimed that its wage costs had increased by $1500 a week. On the basis of a two-cent raise it collected $4600 a week to cover the $1500 wage boost.

Figure out the profits this firm was able to make for the year following its two-cent increase. With the lovely new margin of $3100 a week it reaped a yearly bonanza of over $161,000. Yet, doubtless, in the public mind the greedy bakery workers and grain producers got the blame for the bread price boost.

The argument that bakers have grabbed at the chance to profit from the small wheat price raise is supported by the reaction of a Saskatchewan co-operative—Davidson—which has its own bakery. This is considering lowering its price of 15 cents per 20-ounce loaf to 14 cents because, says its general manager, 'the bread business is good business."

We cannot think of any better, or any other that has more right to protection from profiteering.

* * *

Production?

Wheat growers use more fertilizer to cash in on higher price props.

Under Kennedy's program for cutting 1962 production of wheat, the top farm surplus item, farmers who reduce planted acres by 10% or more qualify for price supports of $2 a bushel. That's 21 cents above the prop list level for this year's crop. Most farmers are participating in the program to get the higher supports, a check of wheat raisers suggests.

But farmers buy more fertilizer so they can raise more wheat on the remaining acres; this could defeat the Government's goal. In Kansas, the biggest wheat producing state, plant food producers and retailers say sales this fall are running ahead of 1960, despite the smaller acreage. One dealer says his customers are spreading as much as 20% more nitrogen than last year. If the weather is good, this will increase yields per acre 10%, he figures.

Weather is the biggest factor determining yields, of course, but crop analysts say moisture conditions now are among the most favorable on record. Roughly 25% of the winter wheat has been planted in Kansas.

Wall Street Journal 9-26-61

Abundance

Food abundance promises to yield lower prices on many items in weeks ahead. Pork is likely to show one of the steepest price slides. Livestock men predict November hog slaughter will top September by 20%, pushing prices below $16 a hundred pounds in Chicago. Porkers now bring $18.50 a hundred pounds. Turkey prices at Thanksgiving are likely to be the lowest in recent years, thanks to a 26% jump in the number of birds raised this year, as compared with 1960.

Farmers are harvesting a record fall potato crop estimated at 192 million hundredweight, 17 million above 1960. Apple production this year is estimated at 125 million bushels, 15% higher than last year. Many imported food commodities are plentiful and cheap, too. In New York wholesale market, cocoa beans and green coffee in the last few days have sold at the lowest price levels in more than 12 years.

Government price support programs, of course, prevent consumers from realizing the full benefits of heavy domestic farm production.

Wall Street Journal 10-10-61

* * *

Farm output in 1961 now promises to equal last year's record.

Government forecasters figure output of meat, milk, eggs and other livestock products will outdistance the 1960 mark by 5%, about offsetting an expected decline in field crops. Beef production is expected to soar 3% to a new high while a 26% rise in turkey output is now forecast. Milk flow is put at 124.5 billion pounds, up 1.5 billion from 1960.

Crop production was estimated at 4% below 1960 at the beginning of September, but veteran Government economists say the October 1 forecast, due next week, will raise the prediction. Feed grain output is expected to fall 11% below 1960 and wheat harvests are likely to drop 10%, but these declines probably will be partly offset by a 29% rise in soybeans and by bigger sugar and tobacco crops.

U. S. farm production reached a record 127% of the 1947-49 average last year, up from 125% in 1959 and more than 8% ahead of total domestic and export needs.

Wall Street Journal 10-3-61

Nuclear War

Atomic scientist Ralph Lapp said Sunday a nuclear war between the United States and Russia would be over "in one night, perhaps at most two nights."

He rejected suggestions that the United States would be able to double back quickly from such a holocaust.

"I think that we would be in the broken-back phase of our life and we would be struggling merely to get food and to live," Lapp said.

"I assure you that both sides will be decimated," Lapp said, if an East-West nuclear war unleased 10,000 megatons of atomic explosives—equal to 10 billion tons of TNT. And he left little doubt he felt a nuclear war would mushroom quickly to such size.

"Once a war like this starts, I believe there will be few restraints," he said. "You see, there is no difference really between a democracy and a totalitarian state once war breaks out because the President cannot consult the people as to how they feel about something."

In such a situation, he said, "I do not think that you would ask whether or not you were winning. You would expend full effort because you wouldn't be sure."

The scientist said the fear that Red China, Poland or Finland might take advantage of Russia if it were in a "broken-back posture" could deter Soviet Premier Nikita Khruschev from starting a nuclear war.

Lapp, who worked on the World War II Manhattan atomic bomb project and other U. S. nuclear programs, made the statements in a radio interview sponsored by the AFL-CIO.

Asked whether there was a chance of a nuclear war starting by accident, Lapp replied, "There can be grave errors, as there have been in the past in intelligence. There can be a grave misestimation of enemy intentions. There can be accidents."

Lapp said the Russians knew where U. S. missile sites were located and would aim at them rather than cities in any atomic war "for it would avail an enemy nothing to strike at our population."

He said he believed one purpose of the current Soviet nuclear test series was to develop mobile missiles that would be shifted around to prevent the United States from zeroing in on them.

Lapp said Russian nuclear tests in the Arctic drop 10 times as much radiation on the world as U. S. bombs of the same size exploded in the Pacific.

He said this was because there is a "window" between the tropospheric and stratospheric layers of the atmosphere over the Arctic which permits debris to fall to earth quickly, before it has lost much of its radioactivity. Lapp branded talk of a neutron death-ray bomb as "a kind of great fraud."

He said such a bomb, which would kill humans by radiation without destroying property, would be impractical in any wartime situation.

* * *

L. A. Times, Nov. 5, 1961

Looking beyond massive nuclear attack, the federal government has coldly decided that individual Americans who survive in undamaged areas must take a back seat to keeping alive the national economy.

Insurance companies would go bankrupt immediately if they tried to pay all claims on policies which did not specifically exclude liability in nuclear war. Some 25 million to 100 million persons might be killed and 30% to 40% of the industrial capacity destroyed in such a war.

To keep the companies going, because they play such a vital role in the nation's financial system and because their payments would be only a drop in the bucket toward restoring national solvency, they would not be expected to pay off on the policies, according to the approved government plan.

Instead, there would be "an unprecedented national policy of loss sharing" put into effect. Through it the government would guarantee to pay, eventually, the insured losses of individuals and corporations (and perhaps even of non-insured next-of-kin). But the amount of the payment would be in proportion to what the nation could afford, regardless of the policy size.

Insurance on distant relatives and inheritances outside of the immediate family may be disallowed by the government, according to Edward F. Phelps, economic stabilization official in the Office of Emergency Planning. The claims would be paid to a national fund to meet the war losses as a whole.

Although socialistic in concept, the loss-sharing plan is not aimed at providing social equity to insure that individuals come out of the war financially untouched. Its goal, Phelps said, is to

"support solvency and functioning of the economy on a 'going concern' basis."

The plan is part of Annex 27, dealing with economic measures, in the over-all "National Plan for Civil Defense and Defense Mobilization." Agencies now are laying the foundations for implementing the over-all program in time of war.

It is based on the philosophy, according to Roland I. Robinson, advisor to the governing board of the Federal Reserve System, that "we would all be in this kettle of fish together." All who survive "would divide up the losses."

"As cruel and inhuman as the thought may be," Dr. Robinson said, "it is conceivable that the ultimate welfare of the country and the ultimate welfare of even afflicted individuals might be better served if the power of the government were used purely and coolly to restore economic solvency and if we did not try to indemnify for losses of health and ability to earn a living."

Suggestions for setting up a war damage insurance company before attack, and paying off only those covered by the government-owned corporation, were discarded. Among other reasons, there was no basis for setting premium costs for such insurance.

The loss-sharing plan has other provisions. If it works, Phelps said, persons escaping from damaged areas and those living in undamaged areas 'would have their checks honored on banks in other parts of the country, even if they had no proof of deposits or if the banks had been destroyed. Loss to cheaters would be absorbed by the nation as a whole."

Similarly, stocks and other private investments might be exchanged for government certificates which would be convertible into cash 10 or 20 years after hostilities ceased. Cashing in securities immediately would lead to inflation and serious danger to the nation's financial structure, it is held.

Prices, wages, salaries and rents would be frozen and rationing of essential consumer goods immediately begun.

Comment: Rationalization 'a la Price System'.

* * *

Albertan, Calgary (11451) Alta. 11-1-61

Automation increases employment because, by permitting business to become more efficient, it paves the way for growth and opens the way for new opportunities that 'otherwise would not exist."

This statement was made by Frank Amato of Toronto, secretary-treasurer of Underwood, Ltd., in Calgary Tuesday at a display of the Company's latest office equipment.

The purpose of automation, whether in office or factory, *is not to reduce employment* but to make people more productive. There are jobs today which cannot be done properly without automation, he said.

While many workers are asking for a shorter work week there are *others who must work 60 hours a week and more because automation has not yet been applied to their jobs.*

Without some degree of automation business will find it increasingly difficult to survive in today's competitive conditions, Amato said.

Comment: We have seen many instances of stupidity, but this one caps them all.

* * *

Labor Herald, Maryland, 11-24-61

"Food donations to needy families in Maryland doubled during the first six months of 1961," said Noah Kefauver, president of Maryland Farm Bureau. "Four million pounds of food were distributed in comparison to two million pounds for the same period for 1960."

"Our eligible needy families should share in our agricultural abundance," stated Kefauver, "but we must make certain that advantage is not taken of a good thing. It is at this point that all citizens must be constantly alert to make sure that the program is carried out according to its original purposes."

Comment: Evidently there hasn't been enough automation to provide these Marylanders with jobs so they need public assistance until it catches up with them.

* * *

The Right Not to Be Lied to

Parade, Sept. 17, 1961

The members of the Cuban expeditionary force, who were repulsed in their attempted landing this past spring but not captured, are no longer on the U. S. payroll at $250 a month. Instead they are receiving less than half that amount from the Cuban Refugee Emergency Center of the Department of Health, Education and Welfare. In short, they're still on the government payroll but at reduced prices.

Comment: Our newspapers did not inform their readers that the U. S. paid these loyal Cubans. According to them the invasion was spontaneous.

As Others See Us

Ottawa—Magazines in Canada have taken up an attack on the press of the United States for alleged anti-Communist propaganda, lies, and distortions.

Articles "exposing" American news reports are concerned with what American papers print about Cuba, Berlin and Russia. They often point fearfully to the growing "right wing" in the United States.

"We are targets of a propaganda campaign for which it's hard to find a precedent in peacetime," MacLean's magazine says in an editorial. "Its object is to make us believe in a crisis over Berlin. For weeks the reports of United States new services have been alerting us to the menace of a showdown.

"And what, exactly, is it that Khrushchev is threatening to do in Berlin? He is threatening to go away. That is the menace that has dismayed the Germans and confused the whole western alliance—not a Soviet attack, but a Soviet withdrawal."

"The question which is bound to occur to anyone who makes a regular study of the channels by which Americans get their information, what passes through them, is a disturbing one," says an article in another magazine, Saturday Night.

"What future is there for a democracy which cannot face undoctored facts about its rivals or itself? It is not particularly reassuring that most Americans are shrewd enough to realize that very little of what they are told is true.

It is said the New York times did all it could to see that its readers would not realize the truth about the program recently announced by the Communist Part for Russia—issued by the Russian embassy in Ottawa under the title "For Peace, Labor, Freedom, Equality and Happiness of All Peoples" on the same day that a German was shot

Concluded on Page 26

White Collar Automation

Reprinted by permission from *The Nation*, Sept. 6, 1961.

About 10,000 electronic computers have been installed in offices in the United States in 1961. On the basis of Bureau of Labor Statistics estimates that, on the average, each computer affects 140 jobs, 1,400,000 workers were affected last year alone. The BLS estimates that about a fourth of these jobs—350,000—will be abolished altogether. The rate of installation of office-automation equipment will probably accelerate. If the sixty-eight companies that are now manufacturing computers in the United States should double their sales this year, 700,000 additional clerical jobs will be abolished.

Still more jobs are expected to be eliminated by other types of automation devices. For example, an automatic sales clerk can dispense up to thirty-six varieties of products, accept payments up to $5 and give the customer his exact change. According to Congressional testimony, an 'automatic law clerk" can perform seven man-hours of legal research in a few minutes; within ten minutes of receiving a question involving tax exemption, the machine analyzed 400 laws from fifty states and the District of Columbia, typed all the statutes and case citations, and had begun typing the full text of the material.

Small transistor computers—the size of an office desk—are being manufactured at a price that small businesses can afford: IBM and RCA, as well as many universities and private management-consulting organizations, have computer services for rent. A "do-it-yourself" computer center is in operation in Los Angeles. Operating like a laundromat, it solves complex problems with a minimum of staff assistance.

IBM has a reading machine that can scan 1,800 words a minute and also automatically operate a tele-printer for long-distance transmission of its messages. A similar electronic scanner already in use by a New Jersey utility company does a like work of twenty-four key-punch clerks. A phonetic typewriter is being developed by RCA which, using sound language similar to speed-writing, prints exactly what it hears (the word "typewriter," for instance, would be printed "tip-riter").

RCA also has an electronic-systems center in New York that provides daily individual process-

ing of stock-exchange transactions such as brokerage commissions, taxes and customers' balances. The center can also calculate the payroll for a business enterprise, including salaries, fringe benefits and social security taxes.

Automation is moving rapidly into industries in which information-handling or accounting play important roles. In this area, electronics' special contribution to automation has been to extend the range of automatic control and to increase the speed of processing information. The Bank of America, for example, has installed an electronic computer, capable of 237,000 additions and subtractions per minute, that daily services over 90,000 mortgage loans and 190,000 installment loans, at the same time making statistical reports to management. The bank has installed forty machines to service its approximately 600 branches in California alone.

The United States Treasury uses a computer to keep track of the 350 million checks which it issues every year. The machine replaces 450 clerical employees and rents for $900,000 a year ($2,000 for every employee replaced). Sylvania Electric Products, Inc., uses a computer that processes a 26,000-man weekly payroll in twenty-five minutes, calculating regular pay, overtime, absences, late-to-work adjustments, withholding taxes, union dues, social security, bond purchases, pension deductions, etc.

J. Lyons and Company, Ltd., of London, pioneered in the application of computers to commercial operations. Once it took this firm nine minutes to compute the pay of each of its 7,000 employees in 150 shops; now it takes two seconds. United Air Lines uses electronic devices to provide its president with an up-to-date profit-and-loss statement every morning. The C & S Railroad uses a computer to prepare 90,000 quarterly dividend checks in less than an hour. A Midwest trucking firm used a computer to process all the relevant data concerning the desirabiliity of moving its headquarters. The conclusion was a recommendation to move—and $6,000 was saved yearly.

The number of jobs that must be created every year if full employment is to be reached and maintained includes not only the number of new employees expected to enter the labor force, but also those who will be displaced by automation. The National Planning Association recently calculated that this year the same level of production as in 1961 can be maintained with 1.8 million fewer workers. The U. S. Department of Labor has calculated that in the next ten years, 26 million new workers will enter the job market—an average of 2.6 million a year. Thus about 4.4 million people will be added to the nation's jobless rolls every year if new jobs are not created for them by economic growth. If current trends continue, about a third of these will not even complete high school and hence will be illfitted for jobs in the coming years of rapid technological advance.

Ironically, those who have the most to lose from automation are the least worried—the personnel in the offices of American industry, where automation today is making its greatest strides. Why aren't they worried? Most clerks are women who consider their jobs temporary: typically, the married ones work to suppplement the family income until their husbands get a raise, while the unmarried ones are working—and living at home —until they get a proposal of marriage. Relatively few are dependent entirely on their clerical jobs and fewer still plan to spend their lives in offices.

Most statistical studies of the social aspects of office automation have ignored these considerations. Most BLS studies of this kind show few, if any, layoffs. However, typically these studies cover the effects of automation introduced during periods of prosperity and expanding employment. It seems that permanent reductions in the work force due to technological changes are often postponed until a general business down-turn permits the layoffs to be blamed on the "depression" or the "recession." Then, when recovery occurs, fewer are recalled than were laid off. Since businessmen are sensitive to the public-relations effects of layoffs, some university research investigations have voiced the suspicion that they have had easier access to date in those firms where the introduction of automation coincided with increased employment.

Some large employers have admitted that they timed layoffs to coincide with periods of recession. One of the nation's top executives was quoted by the New York Post financial columnist, Sylvia Porter, as saying: "I'd rather have our employees work a longer week and pay overtime than add one more man than necessary to the payroll.

". . . It's cheaper to pay the extra expense of overtime than to pay extra expense of a public-relations drive to explain a layoff."

A changeover to office automation usually takes longer than in the factory. The continuity of office operations cannot be interrupted and the data of the old arrangement usually cannot be

transferred directly to the new system. There is no way of stockpiling materials or products in advance and little opportunity to make trial runs. Typically, the changeover must therefore involve several distinct stages during which time at least three separate work forces are needed: one to continue the old system, one to convert records and procedures to the new system, and one to initiate and operate the new system. This may take anywhere from six months to four years. Consequently, automation has been proceeding slowly enough to allow normal turnover to disguise its effects.

In the United States today the white-collar work force is larger than the blue-collar one. Former Secretary of Labor James Mitchell said recently, "In the telephone industry, automation has reached a point where, for all practical purposes, the companies regard themselves as 'strike-proof.'" The same is true, in varying degrees, in many other different industries.

Both major political parties accept credit for prosperity—and blame the other party for unemployment. The public has concluded, from these arguments, that recessions and unemployment are indeed controllable. The only remaining question would seem to be whether we must always wait until a crisis is upon us to do something, or whether we can develop amelioratives in advance.

It is generally agreed that a great injury will be inflicted on this generation, and on future generations, if nothing is done to halt the relentless growth of the mass of jobless, rootless, disillusioned and frustrated workers displaced by technological changes. Clerical workers should not be forced to match wits with machines, but should be given the opportunity to rise as high above the moron mentality of machinery as their talents permit.

An enormous variety of proposals have been advanced to solve the problem of unemployment and automation. The best hope seems to lie in the recommendations of the House Subcommittee on Unemployment and the Impact of Automation. All four Democrats and two of the three Republicans on the subcommittee recommended that the qualified among the unemployed should be encouraged to further their education, and that the federal government should contribute financially, to improve vocational education. The subcommittee also recommended the migration of technologically displaced workers to other areas, recognizing that it is often cheaper and sounder economically for workers to move to where the jobs are than for factories to move to where the surplus laborers are.

A "GI Bills of Rights" for the unemployed has already passed the Senate by a 2-to-1 vote and passed the House Education and Labor Committee by a vote of 24-3. This bill is scheduled for House consideration early this year, and is supported by President Kennedy. It provides federally sponsored vocational retraining for about 100,000 workers the first year and 200,000 the next. Since there are several millions unemployed, this is only a drop in the bucket. In the future, as now, most of the burden of mitigating the personal and economic hardships imposed by technological change will fall on private industry and, in a few cases, on labor unions. One can only hope that they will be equal to the challenge.

—By Walter Buckingham, Director of the School of Industrial Management, Georgia Institute of Technology

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Long Beach Independent, 12-4-61

The Federation of American Scientists proposed Sunday that all international disputes be submitted to binding arbitration to lessen the danger of nuclear war. The nationwide organization of more than 2,000 scientists and engineers said such a move offers the best hope for long-term world security.

In a 3,500 word statement released Sunday, the federation urged also: The beginning of political integration among Western countries of common values; renunciation of first use of nuclear arms; establishment of a United Nations peace on a permanent basis; efforts to curb the spread of nuclear weapons and stepped-up operations of the new U. S. arms control agency.

COVER

The M/V 'America,' placed in service in 1960, is sister-ship to the M/V 'United States,' which was christened in 1958. They are operated on the Mississippi River between St. Louis and New Orleans by Federal Barge Lines, Inc. They are 9000 H.P. and 8500 H.P., respectively, and are fitted with quadruple screws. During its first year of operation, M/V 'United States' pushed tows of 42 barges, and moved cargoes as much as 3,650,000 ton miles per day upstream and 7,783,000 ton miles per day downstream, with a maximum of 35,815 cargo tons in one tow.

The Nation's Water Problem

Rich though it is in water resources, the United States is working itself up to a monumental thirst.

The available water is being appropriated at a rate almost as alarming to scientists as the speed with which it is being polluted.

By 1980, they say, roughly a third of the nation will be short of water, and by the dawn of the 21st century the shortage will have spread to more than half the country.

The Senate Select Committee on Water Resources, which has been studying the problem for the last two years under the leadership of Sen. Kerr (D-Okla.), has reported that the nation must plan on a huge scale to store water, to seek new water supplies, and to save water by keeping pure what we have. It puts a $12 billion price tag on the new storage works necessary, and a $42 billion figure on the anti-pollution work.

Last month Congress passed a "pure water bill" which President Kennedy promptly signed. It set up a $570 million federal program to expand control of water pollution throughout the country. The plan provides matching funds for local water treatment and sewage disposal facilities.

The United States is a water-rich nation, says Dr. Robert Z. Brown, a water expert at the Colorado College Conservation Foundation. But contrary to popular belief, the nation's water supply does have a limit and "there are no developments in sight which will substantially increase this amount."

Couple a finite water supply with a burgeoning population and a steady increase in the per capita consumption of water, says Dr. Brown in the bulletin of the Population Reference Bureau, and you have the basis of the water problem.

There will be between 232 and 274 million people in the United States by 1980, according to Census Bureau projections, and from 295 to 420 million by 2000.

Last year ,the United States used 60% of its water supply, compared with only 8% in 1900. By 1975, experts estimate the country will be using 88% of its total supply.

By 2000, says Dr. Brown, "The available supply and the demand might be perilously close."

The total amount of fresh water available in the continental United States averages a little less than 1,100 billion gallons a day. Sources include surface water from lakes and streams and man-made reservoirs, and underground water from natural reservoirs deep below the surface.

About 20% of the water used in the nation today comes from the underground sources. In some sections—notably the Central and San Joaquin Valleys of California, south central Arizona, the high plains of northwestern Texas and eastern New Mexico and a small area of eastern Arkansas —huge underground sources are steadily being depleted.

Dr. Brown says that of all the water now in use, industry and agriculture each use about 46% while 8% goes for municipal supplies. The biggest water hog of all is irrigation.

Looking at suggested solutions, Dr. Brown is pessimistic.

Converting salt water from the ocean into fresh water is costly. The desalination plant at Freeport, Texas, the first in operation of five planned by the Department of Interior, purifies a million gallons of water a day at a cost of $1 to $1.25 per 1,000 gallons. Within five years, says Brown, the cost should drop to about 30 cents.

"The most promising factor in a thoroughly discouraging outlook for the nation's available water supply is that current research may add up to 325 billion gallons a year to supplies in the West in the next decade," he says. "This includes research in water-saving techniques, such as destruction of water-using streambank plants, reduction of reservoir evaporation and improved irrigation."

—By Charles Stafford, Assoc. Press, in *L. A. Mirror*, Sept. '61.

Water – Precious and Polluted

America is a nation which buries its gold in guarded vaults below Fort Knox, Kentucky, and allows almost any citizen to help himself at a bargain basement price to its most valuable possession, the one precious resource it cannot live without—fresh water.

Today's fastidious city-dweller wrinkles his nose and shudders at the thought of medieval man, who threw his garbage out a window and let his sewage run down a ditch alongside an unpaved street.

But Homo Americanus 1961 has grown so dependent on water and so reckless in its use that many of his streams have been turned into sluggishly flowing sewers, his cisterns run dry as the water table sinks every year and his beaches become so contaminated that signs warn swimmers to enter the water at their own peril.

Water pollution has produced strong reactions from those familiar with its odorous extent. A United States senator has described our streams and rivers as "a vast floating garbage can." A St. Louis Post-Dispatch editorial has characterized Americans as "the world's cleanest people," bathing in scented fats and "drinking a factory's slime" —treated with chemicals and put back into circulation, not cleaned but 're-enriched." Former U. S. Surgeon General Leroy E. Burney has called the condition of our waters 'tragic—a national disgrace."

As American cities expand farther and farther into the countryside, water becomes indispensable to more and more people for drinking, building, bathing, boating, hunting, cooling, and manufacturing. As demand rises, well water drops farther and farther below ground as the water table recedes a few inches every year and never rises. And costs increase as drillers bore deeper and deeper for water.

Ground water is becoming so polluted by detergents and insecticides and chemical solutions and just plain sewage—much of it untreated—that vaster quantities of chemicals must be used before it has done its work and is sent on its way to be recleaned and re-used downstream.

How much longer can the cleaning process go on? Dr. Burney, then surgeon general of the United States, told the White House Conference on Water Pollution last December that detergents are not killing us, or making us clinically ill.

"But how does the human body react to steady doses of diluted chemicals?" he asked the 1,145 conferees. "What happens if the concentration increases, either suddenly or gradually? We cannot say we know the answers."

Dr. Burney, however, did know the answer to those who love the status quo. He said emphatically: "There is no cause for complacency. The condition of our waters is a national disgrace. It is tragic for the world's richest, most powerful and most technologically advanced nation to foul its own nest, limit its own growth and threaten the health of its people."

Conference delegates from all over the nation sketched this outline of the problems of water pollution in the 1960s:

Fifty million pounds of waste are being poured into U. S. watercourses daily. New subdivisions are building, new plants and processes come into use, more water is needed all the time . . . 300 billion gallons a day in 1961, an estimated 600 billion gallons per day by 1980.

New chemical processes pour pollutants daily into the sources of our drinking water—insecticides, herbicides, detergents, solvents, cleaners, dyes, synthetic compounds, corrosive chemicals, germs and viruses. They mix with human wastes and wastes from slaughterhouses, hospitals, canneries and radioactive processes.

Clouds of foam, blown from sewage treatment plants on windy days, point the way to new sources of trouble. Treatment plants are not adequate to the task and the wastes from 25 million Americans get no sewage treatment at all—they pour untreated into our rivers.

The first explorers and missionaries to the New World wrote home about the most extraordinary experience in all their travels — the marvelous sweetness and purity of the limpid waters. Today these waters are described as "a vast floating garbage can."

How did so vast a change occur in the short history of so young a nation?

The germ theory of disease, demonstrated in the 1870s by Lister, Koch and Pasteur, was unknown to America's founding fathers. People in Washington's day believed epidemics of typhoid

fever and cholera were caused by odors, vapors and night mists. The English translation of the Italian word "malaria" is bad air.

In the early 1800s, London authorities shut off a public water supply on a hunch its waters might be contributing to an epidemic of cholera. Their hunch was proved correct—cases of cholera soon decreased in number. By 1879, the Massachusetts Board of Health had enough facts to justify a report on the connection between polluted water and disease.

As the nation grew and cities multiplied, residents of such communities as Pittsburgh and Chicago, states like Minnesota and Massachusetts, learned to identify the cause of typhoid fever epidemics as raw sewage, dumped into the handiest river.

Louisville, Kentucky and Lawrence, Massachusetts, were among the first American cities to try out water filtration and chemical treatment. A few of the states were experimenting with water treatment systems about the time of the Spanish-American War.

Then the job of protecting drinking water on trains and ships was handed over to the U. S. Public Health Service. Increasing complaints about water pollution led the Congress, between 1897 and 1909, to consider various bills authorizing the health service to control the pollution of water.

But it was 1912 before Congress passsed the first national water pollution control bill of any consequence. That bill authorized the PHS to investigate the effects of sewage pollution in major rivers and lakes. Six sanitary engineers were assigned to start an Ohio River Investigating Station at Cincinnati and that station today provides basic research data on stream pollution.

A modern Water Pollution Control Act was passed by Congress in 1948. It was amended in 1956 but further amendments were stalled off in 1960 when President Eisenhower vetoed a bill which would have added $90 million a year for 10 years to the $50 million a year authorized by Congress in 1956 to assist municipalties in building sewage treatment plants.

Under the 1948 act and its 1956 amendments, the PHS must carry on technical research and provide assistance to states, municipalities and area agencies to help prevent water pollution. It can take steps to stop pollution after holding hearings, issuing orders and bringing suit, as it did in the only such case on record—the case of St. Joseph, Missouri—after three years of delay.

St. Joseph and its industries have been pouring raw sewage into the Missouri River for more than 100 years. A PHS engineer who inspected the river reported it unsafe to come into contact with the water south of the city.

The river divides Kansas from Missouri. Just 24 miles south of St. Joseph, the city of Atchison, Kansas, takes its water supply from the polluted river. Atchison has taken extraordinary pains to clean up the water, but with limited success. An Atchison resident hold PHS at a hearing: "At times . . . the chlorine content was such as to cause a serious odor and some sickness among the people in Atchison."

PHS brought Kansas and Missouri health officers together in June 1957 for a conference with St. Joseph and 18 of its companies. Little was accomplished until the federal government got the Missouri Water Pollution Board to crack down. In 1958, St. Joseph voters defeated a bond issue for a treatment plant.

In 1959, PHS held a five-day hearing that brought a notice to the city and the 18 employers to stop polluting the river. They were ordered to get treatment facilities into operation by June 1963. Again the voters rejected a bond issue. A newspaper editorial writer applauded the voters for "pioneer independence."

St. Joseph is itself a victim of the habits of its northern neighbors—PHS engineers reported floating sewage and gas bubbles at Sioux City, Iowa; untreated packing plant wastes where the Floyd River flowers into the Missouri; at Omaha, grease from the river lines the walls of the water settling basins and, below Omaha, crows ride on the grease from the city's packinghouses.

U. S. communities have made amazing strides since the early 1900s in disinfecting water for public use. This resulted in a sharp decrease in death rates from waterborne diseases—for example, typhoid fever deaths dropped over a 50-year period from 22.5 deaths per 100,000 persons to .05 per 100,000.

But while this was going on, the urban boom poured an unmanageable quantity of waste into streams everywhere. Odors and dirt appeared; fish, swimmers, boaters and picnickers disappeared. Dumping of raw sewage in rivers uses up the oxygen supply and kills off oxygen-producing

algae so that marine life dies off and slime deposits line sewage channels.

Health authorities have been alarmed by outbreaks of disease traced to polluted water—yellow jaundice in Oregon and Utah, paralytic polio in New Jersey, a typhoid epidemic in Keen, New Hampshire.

Shortage of water supplies is a problem plaguing areas of our country like California and Utah. In New York City, surrounded by natural watercourses, municipal water reservoirs got so low that police had to forbid all washing of cars. In more than 1,000 other communities, police cars patrolled the streets in 1957 warning citizens not to water their lawns until after dark.

Some communities, like Greater Toronto, have achieved a large measure of success in coping with water shortages and pollution by banding together into regional organizations. Others are moving in that direction, as in Ohio where the Lake Erie Watershed Conservation Foundation is working to amend the state laws to permit chartering of a Water Authority which would pump water from Lake Erie to parched inland areas.

Last November the AFL-CIO issued a warning of the dangers of pollution and called for a "national water policy solidly integrated with a national resources and energy policy."

—By Eugene A. Kelly in The American Federationist, July, 1961.

Unemployment a Mark of Progress

It's too bad perhaps that those eminent scientists whose researches led to splitting the atom did not rely on the same processes of logic and deduction used by those who discuss at such wearisome length economic problems in general and in particular such questions as unemployment, productivity and so on. Because, had that been the case we should certainly not have had the H-bomb to worry about. For with the kind of reasoning that these latter voluble gentry favor no one could ever possibly reach the right conclusion.

Especially on the perennial question of unemployment many of the proposed remedies and the sort of thinking that produces them are so woolly that even a schoolboy should be able to see through them. Yet the same old stale nonsense is repeatedly trotted out by more or less prominent individuals and presented as though it were something new and dynamic, guaranteed to work a lasting cure.

The most obvious way to get rid of unemployment is to create more jobs — lots of them. This seemingly simple, direct approach appeals to the men of action as being the most effective method. So they advocate all manner of schemes for making work through public and private initiative which, it is presumed, will get the wheels turning and put idle men back on the job.

Now this would be all right if it would do the trick but it doesn't except rarely and then only for short periods and on a limited scale. The reason is that it starts at the wrong end. The bottleneck in production which slows up industry and throws men out of work is not at the commencement of the productive process not, indeed, in the cycle of production at all. It is in the field of consumption. If goods can be distributed, that is if profitable markets are there, then production will be no problem at all; it will look after itself.

The building trades are not doing too badly this year not because there was a great scurrying around to find jobs for the carpenters, plasterers, bricklayers and such but because through NHA the government provided funds in such generous measure that a good market for new houses was guaranteed. It should be self-evident that the best way, indeed in the long run the only way, to ensure maximum employment is to provide an adequate profitable market for the finished product. The moral is if you want to create jobs you must start at the end not at the beginning; the hold-up is in the field of consumption, not production.

A highly articulate group among those who are dedicated to the laudable task of eradicating unemployment lay stress on the need for more education and technical training. Few will dispute the argument that in these days when the application of science and technology to industry is continuously expanding the better educated and more skilled a worker is, the more likely will he be to secure and hold a job. But from this perfectly sound position many of the proponents of more schooling jump to a quite unjustified conclusion.

They can see that at the present time the more highly skilled a man is the more likely he is even in periods of recession to hang onto a job. Men who are employed, they find, are mostly in the skilled bracket while the unemployed are largely

unskilled. From these observed facts they hasten to draw the quite unfounded conclusion that if all men were trained they would all have the jobs which, as the logicians would say, is a complete non sequitur—it doesn't follow at all. If all workers had in fact the benefit of a first class education and technical training there would not, other things being equal, be one more man employed than there is now. Indeed because more and more highly skilled workers would be available fewer would be needed. So the end result would be that the highest skilled people would have the jobs and less skilled but still trained craftsmen would fill the ranks of the unemployed—a condition even more frustrating and demoralizing than at present. No amount of education and training however valuable in itself would help to solve mass unemployment.

The reason for this again would lie in the field of consumption. Unless there is a market for the finished product, unless goods move into consumption, they will not be produced. That goes without saying it doesn't matter how many skilled personnel nor how much efficient machinery is available. Goods are produced in sufficient quantity right now to satisfy the effective market. When that has been done wheels stop turning and men are thrown out of work. The significant fact is that we have enough and more than enough men and machines now to glut the market for most goods and services.

There is as it seems to us a fundamental misconception about this question of unemployment which until it is cleared up will permanently block efforts to find a solution. This arises from the lack of a clear understanding of the purpose of the industrial system. Briefly that purpose is to produce and deliver goods and services up to capacity or until man's needs are satisfied. Contrary to apparently widespread belief there is no obligation on industry to provide employment. On the contrary as a result of increasing efficiency and the all but miraculous advances in science and technology, industry should be and is capable of producing to capacity with fewer and fewer employees up to the point of automation. So that it could be argued that the creation of unemployment is in fact evidence of increasing productive efficiency.

Assuming that industry can perform its task with less and less hired help what then is to be the fate of the unemployed? That should not present serious difficulty. As we have stated the terms, there has not been any unemployment problem until maximum production has been attained. At that point the technicians and engineers will have done their job. There will then be in existence and in continuing production enough goods and services for all, employed and unemployed alike. It will become the task of politicians, the sociologists, the economists and financiers to establish a practical method of distributing the available goods, as a right, to those who, because they are unemployed, don't draw wages or salaries. What they will do with their time is a problem of another order which is not incapable of solution.

We realize that these remarks will strike many readers as quite wacky and others as perhaps having a basis in fact but quite impracticable. We would simply remind these and other readers that we are living in desperate times and desperate revolutionary measure must be taken as a matter of course if we are to have any chance of survival. The sooner we begin to think in those terms the sooner will we be prepared to take the radical steps that must be taken if our civilization is not to be wiped out.

These are not times that can by any stretch of the imagination be called normal. We are really living under sentence of death and the execution may be carried out any day. In the meantime we must strain every effort to save ourselves while any hope remains. In these circumstances the continuing existence of unemployment is a mark of rank inefficiency verging on treason. For the weapon which Mr. Khrushchev repeatedly tells us he will use to crush us is Russia's increasing productive capacity. In a few years he will bury us under a flood of goods and by their effective use he will destroy our trade and wean all the uncommitted and wavering nations away from us.

That being so we must do all in our power to meet the challenge. We must use our still unmatched capacity for production to the limit. There is no lack of evidence that we are failing dismally to do this. The clearest proof is the fact that we have an unemployment problem at all.

Once again the first step to all-out effort is to put the products of our endeavors to use. To suggest that there can be real surpluses or any unwanted goods in our world of today is to give clear proof that we have not yet grasped the nature of the gravity of our position. How close must danger approach, how often must we be warned before we face boldly and squarely the inescapable tasks which lie before us?

By A. P. Waldron in *The Western Producer*, Nov. 1961.

TECHNOLOGICAL SHORTS

Montreal has new Automatic-Classification railway freight yard; world's largest — 165 miles of track, capable of handling 7,000 cars per day — two operators.

Toronto Globe & Mail, Sept. 15

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Lockheed Electronics Co., in Los Angeles, is spraying "paint" on film in layers so thin that 50 of them would make the thickness of a postage stamp. Using arc gun that shoots a stream of gas three times hotter than the surface of the sun.

L. A. Times, Oct. 22, 1961

* * *

Westinghouse scientists announce a super magnet, weighing a pound and about the size of a doughnut which creates a magnetic field twice as strong as a conventional electromagnet weighing 20 tons.

Long Beach Independent, Sept. 22

* * *

Allis-Chalmers will build an electric generator for Consolidated Edison Co. at New York to generate a million kilowatts, largest ever ordered in this country.

Wall St. Journal, Sept. 28

* * *

Quarter page advertisements in Wall Street Journal, Sept. 28, a General Electric Automatic check reader capable of reading 1,200 documents per minute.

Half page with picture advertisement in Wall Street Journal, Nov. 21, of National Steel's Mill of the Future, an 80-inch hot strip mill — the fastest, most powerful in operation today — master-minded and controlled by closed system computer.

Driverless bus demonstrated in Dallas, Texas, manufactured by Flexible Co. & Barrett Electronics Co., may be tried out in Chicago.

Wall Street Journal, Oct. 17

Raytheon Co. takes half page advertisement in Wall Street Journal, Jan. 9, 1962, to tell how they can speed conversations between machines.

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California Farmer of Sept. 16 tells of development of mechanical grape harvester.

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From International Nickel Corp., Nickel Topics, picture of Truck Crane capable of handling 90 ton loads. Boom is 250 feet long.

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Compressed Air magazine shows two jumbo drilling machines which work side by side drilling a tunnel 32 feet in diameter.

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Electrical Worker's Journal, Aug. '61, has article on an Automated Radio Station which plays stations' music, inserts commercials at proper time, identifies station, gives time, weather and news, records and logs commercial announcements, etc. If transmitter fails it rings a bell and if readings are way off, shuts down and calls for engineer.

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California Agriculture, Sept., shows a Blower-Shaker for harvesting prunes.

* * *

Compressed Air, Nov., shows moveable plastic room to provide ideal conditions for testing tape controlled lathe.

* * *

Dunn's Review, in October, describes process of refrigeration with liquid gas which is non-mechanical and much less expensive than old methods. In November, Dunn's has double page spread of the Cross Transfer-Matic which completely processes automobile fly wheels and assembles ring gears. Also Dunn's tells of a new set-up for remote reading of electric house meters.

Mental Blocks

(Continued from Page 2)

our advancing technology and the rapid progress toward complete automation, even if we are able to raise the level of ability to capability, there would not be one more person employed; there is no possibility that industry will produce more than can profitably be sold. Certainly the capacity to produce by the industry of this country is sufficient to glut the market as provided by our present method of distribution. Yet there are millions of Americans who are now unable to buy the products of our farms and factories.

The answer then, comes back to distribution. Exploring all the avenues of escape from this dilemma, the logical thinking person inevitably reaches the conclusion that under this Price System, no solution is possible. Certainly the Price System operators have explored all the possibilities and now have reached an impasse.

So again thinking logically, when you reach an impasse under the rules of the game as played, you discard the hampering restrictions. You remove the mental block. Then you realize that a nation such as ours which has ample resources, varied climate, fertile soil and vast installed technology, which the technologists are capable of operating, has no legitimate excuse for having an unemployment problem, or for millions of Americans to face want and destitution particularly when we have a potential abundance.

This is only one of the more pressing problems facing America, yet our leaders flounder around, incapable of providing workable solutions. The most obvious, of course, which they have advanced has been our so-called defense program in which we waste our irreplaceable resources at an accelerating rate and prostitute our scientific knowledge to produce ever more lethal weaponry to the frustration of all of us.

America's problems are here at home and are becoming more acute daily, yet our leaders continually point to dangers off this Continent, in order to justify the enormous expenditures necessary to service the military budget. Each new call for additional expenditures is prefaced by a manufactured crisis abroad.

Technocracy has been warning of these accumulating problems for a quarter of a century. When Technocracy was first conceived the problems were perceptible and a solution was proposed. Now the problems are acute and the solution is the same, but mandatory. We are operating on borrowed time and this Price System is under sentence of death. We will remove our mental block or perish.

—L. M. Proctor

RESEARCH BULLETIN

(Continued from Poge 17)

dead in a canal while trying to swim to freedom from Communist East Berlin.

Saturday Night said the New York Times misrepresented the Russian document in a misleading and hysterical editorial "but the remainder of the American press went much further," going even beyond "mere distortion and misrepresentation."

The same article says that President Kennedy has "sounded his horn, like Little Boy Blue, to rally the American people behind him to face the non-existent war threat."

The Canadian Forum, a paper-bound Socialist sheet, has reported: "The United States press has shown itself perfectly capable of misinforming the United States on the Cuban question—and therefore also Canada. The whole case for the reports that Cuba is now openly Communist rests upon the word Socialist, for it is the only word that Castro has provided them with."

The Forum article "wonders whether tendentiousness and utter disregard for the truth have not become an integral part, and a financially necessary part of the American way of journalistic life."

James M. Minifie, Washington staff commentator for the Canadian government's CBS network, in an article in another little Canadian magazine, pleaded the right of Americans "not to be lied to."

Minifie agreed with a Forum thesis that "America is accepting the news it wants to hear and discouraging its correspondenets from stating the truth, and even from looking for it."

Minfie's own accuracy and judgment have been attacked by at least one Canadian cabinet minister, in a speech scorning the CBC pundit's preachments for Canadian neutrality.

Los Angeles Tibes, 11-23-61

* * *

Washington (AP)—The Bureau of Roads estimated Wednesday that the number of motor vehicles registered in the United States will reach 76 million this year.

L. A. Examiner 10-5-61

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or associaton either in North America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are $9.00 which are paid by the member to his local Section. Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol sgnifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers, and economists that became known in 1920 as the Technical Alliance — a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every State and in every province in Canada, and in addition there are members in Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHO?

Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher, or housewife — so long as you are a patriotic North American — you are welcome in Technocracy.

The TECHNOCRAT

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March. 1962 Whole No. 201

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For security in America — for a world peace which only an integrated technological operation of this Continent could maintain, for the building of a new civilization which shall be an example to all the world, let us keep America in peace and set about the guiding of North America to its technological destiny of abundance as one nation and one people.

—Howard Scott

— SECTION STAMP —

The TECHNOCRAT

PUBLICATION OF TECHNOCRACY INC. • LOS ANGELES • CALIFORNIA

JUNE '62

IN THIS ISSUE:

- The Criminal Element
- Facism Grows in West Germany
- The Thinking Machines
- A Few Statistics
- Keep Your Eye on the Ball

NEWS MAGAZINE

Whole No. 202

25 CENTS

The TECHNOCRAT

JUNE, 1962

Editorial

Keep Your Eye On the Ball

In these days of confusion and frustration it is essential for all who are interested in watching and evaluating social change to avoid the controversies of the political, financial and ecclesiastical elements of our society.

The important facts apparent in the trends are that America is rapidly approaching an impasse in its social and economic life. All the manipulation and subterfuge of our present political, financial and ecclesiastical leaders are simply means to keep the "lid on" while they jockey for position and power. Any gain to the public at large is purely coincidental. All the media of mass communication aid and abet the program of these leaders, for they are part and parcel of the status quo and their interests are identical.

In our society where the major necessities of life are more and more being produced by technological means and less and less human labor is required, the problem of distributing this ever-increasing flow of goods and services is rapidly becoming unmanageable. The use of technological methods of production is eliminating the need for human labor to such an extent that purchasing power to move the goods produced is not sufficient. Even the extension of fantastic credit arrangements is unable to move large enough quantities of goods to keep the factories, farms, mines and transportation facilities operating. This does not take into account the impact of idleness upon the human beings who formerly produced these goods. Unemployment increases and will continue to increase with time.

The picayune programs offered by the political leaders are about as effective as "bailing a sinking ship with a teaspoon." And as we install more automatic means of production and thus create less purchasing power to move the products into use, the financial element will find profits disappearing and their incentive gone.

It is good to know that when all the expediencies have run their course, there have been answers worked out for the social problems on this continent. As Technocrats we are charged with a privilege and a duty to spread this knowledge.

Now is the time when we should be stressing Technocracy's program. The distribution of an abundance, produced by all possible means, can be accomplished by the use of the Energy Certificate. The smooth operation of the social mechanism by a re-orientation of function as depicted in the Organization Chart can be assured, and the participation of every citizen can be arranged by a modification of the Calendar. The by-products of the installation of this program will result in the highest standard of living, education and health of any civilization in history.

—L. M. Proctor

June, 1962

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Whole No. 202

The Criminal Element

"Human nature, which evolved through millions of years of struggle, competition and conniving under conditions of scarcity and insecurity, cannot be trusted in the presence of opportunity and incentive to "commit crime!"

One of the hazards that besets mankind is that of the 'criminal element' that infests every society. This 'element' is not easy to define and its mischief covers a wide range of activities. Some of this mischief may not generally be regarded as criminal; yet, nevertheless, it has an adverse effect on human welfare.

Both the terms 'criminal' and 'crime' and controversial. Definitions vary with time, place, and viewpoint. Various codes have been devised to define and treat the multiple facets of criminality, some strictly, others very loosely.

The legal code, whether the 'law' of a tyrant dictator or the considered legislation of a representative body, attempts to define by statute and judicial opinion what constitutes a crime and to specify punishment and/or rehabilitation for criminals. However, the legal code is often an expediency rather than an attempt to arrive at an absolute appraisal and treatment of criminality. It varies widely from time to time and place to place. What is judged a crime in one nation, state, or county may not be a crime at all in the adjoining nation, state, or county. Just prior to the Roosevelt New Deal, it was illegal for the individual to possess whiskey and legal to possess gold; a year later, it was illegal to possess gold and legal to possess whiskey. A legal code that is violated by only a few individuals can be rigidly enforced; but a code that is not respected by a majority—for example, an absurdly low speed limit on a highway—is extremely difficult to enforce.

There is also a generalized legal code, more fundamental but less clearly defined than the statutory code, which is known as 'common law.' This is, in general, a summary of what has been permissible and forbidden over a long period. It also varies with time and place, but not as much so as the statutory code. It is subject to acceptance, modification, or rejection by the local statutes. For example, under common law, if a man and woman proceed to live together as husband and wife, they are considered married; and if they separate and no longer consort with each other, they are considered divorced. But, under statutory law, it is not that simple.

A third code of conduct is that known as moral law. This is usually associated with some religious or philosophical faith. Moral law is often quite arbitrary in its definitions of crime and punishment. Often it draws its authority from what is claimed to be divine edict. Other times, it is a product of philosophical ingenuity. Moral law often runs contrary to human nature and past experience, hence is very difficult to enforce. It varies widely from cult to cult. Yet, it is often more vigorously (and viciously) prosecuted than the legal codes. In most clerical fascist societies, the legal code merges with the prevailing moral law. In 'democracies,' such as the United States and Canada, there is only a partial merger; for example, in the case of Sunday Blue Laws.

In a milder form, there are various other codes of conduct; such as, 'conduct becoming (or unbecoming) an officer and a gentleman,' protocol, and etiquette. These codes generally concern themselves more with manners than with criminality as such.

Then, there are special codes which apply to certain groups or to people under certain conditions. Among these are military law; the law of the sea; the 'law of the underworld.' These are often very strict in their definitions and interpretations and severe in the application.

The Law of the Jungle

The most primitive code, if it can be called a

code, is known as the 'law of the jungle.' This is the 'law' under which animal nature, including human nature, evolved for millions of years; and it still plays a large part today in determining our conduct.

Under the law of the jungle, the individual or the small group is sovereign. One individual may kill another in self-defense, for food, in competition for a mate, for loot, for revenge, or 'just for kicks.' Stealing the abode, food, possessions, mate, or livestock of another is treated as legitimate if it can be carried out successfully. The defense of and same by any means at hand is also legitimate under this 'law.'

It might be said that the law of the jungle is the "instinctive law' which governs human behavior. Under it, the strong, the aggressive, and the cunning tend to dominate and despoil the weak, the meek, and the unclever.

Among humans, the 'strong' tend to be self-seeking and ambitious for wealth, power, and status. Toward these ends, they may organize others to do their bidding and, thereby, enhance their own strength and power. They become the 'leaders' of the organized group. The effects of such 'organization' range all the way from purely destructive to highly constructive; usually they tend to be predacious.

The first human organizations presumably were for purposes of gathering or hunting food, for building abodes, and for defense against predators, both animal and human. Organization gave strength and potence to those who, as individuals, were weak and impotent. 'In union there is strength.'

When two or more people live together in close association, some rules of conduct must apply. As primitive people organized into tribes, codes of conduct gradually evolved as a means of stabilizing relationships within the group and of reducing conflicts between members. These codes evolved differently in different tribes. In other cases, the codes were loose and tended toward functional significance. In other cases, they became arbitrary and strict, and the enforcement was sometimes cruel. The general tendency was toward discrimination against women, captives, and strangers. The definition and treatment of crime tended to become more or less standardized into tribal traditions, subject, however, to some modification by the leaders.

The leader of the early barbarian tribe usually had a high degree of fiat power, although, in many instances, his decisions and proposals were subject to discussion and review by a council of associate leaders. Considerable power also resided in the custodian of the local superstitions and rituals—the medicine man. Seldom was there any appeal, however, from the decisions of the leaders, and execution of those decisions was usually prompt.

Killing, as a crime, received various considerations among different groups. The destruction of babies, especially where there was a threat of excess population, usually was not treated as a crime. Even when the destruction of babies was officially frowned upon, there were subterfuges—death from natural causes could be simulated. . . . It became a crime to kill another member of the tribe long before it was a crime to kill a stranger. Even within the tribe, the killing of another member was evaluated as a crime according to the reason for the killing, the manner of killing, and who killed whom. It was generally conceded that one had the 'right' to kill another in self-defense, in defense of property, and for adulterous intrusions into his sex life. For lesser offenses, killing was often permitted and condoned if it were done in a 'fair fight.' Dueling was an almost universally accepted manner of 'settling differences between gentlemen.' Killing another to avenge the slaying of some close relative was usually regarded as a private matter, or even as a duty. . . . Killing in an unorthodox manner was generally abhored more than killing by long-accepted means. . . . The killing of one's social inferior was a less serious crime (if any) than the killing of one's equal. Often, the killing of a wife, a slave, a servant, or a stranger was treated as no crime at all, especially if a case of provocation existed. However, the killing of one's social superior was seldom condoned even in the presence of substantial cause.

In the more advanced barbarian societies, the sovereign authority could wipe out whole sections or elements in the society through purges, pogroms, or decimations with virtual impunity. . . . In military operations, a commanding officer could order individuals, detachments, or even major formations into death traps. As for enemies, they could be slaughtered without compunction. Death was the ordinary fate of all military captives, except where they could be used as slaves or held for ransom. Civilians who were overrun by military operations, whether enemy or friendly, could be sacrificed on the slightest pretext.

As societies became more civilized and stable,

they tended to repress the law of the jungle and to introduce formal codes of conduct. This development first applied to conduct within the group and among the members of the group. But even after legal and moral codes became established within a group, the law of the jungle still applied to relations between group and often between factions within the group. It has been only recently that major nations have felt any compulsion to observe codes of conduct above those of the jungle in dealing with other nations. Even the mild restraint on the conduct of nations exercised by the United Nations organization is strongly resented by the more atavistic individuals and groups. The old League of Nations disintegrated when it tried to referee international conduct.

In our society, in which a certain amount of law and order was established concerning the conduct of individuals, there remained little or no law to regulate the conduct of corporations. For a considerable time, these could commit almost every crime in the book by one subterfuge or another and no civil law could touch them. They could do such things as working children to death in sweat shops, swindling widows out of their property, and shooting down protesting employees. In recent years, some attempt has been made to govern the conduct of large corporations. Naturally, such attempts at corporate regulation elicit screams of rage from the disciples of jungle law.

When looking at crime from the standpoint of the individual, we find the view colored with mixed sentiments. One may want protection and security for himself; but, if there is an opportunity for him to gain something from a little criminality, he may find it convenient to relax his conscience. The latter is especially easy to rationalize if the victim happens to be the government, an impersonal institution, or a foreign population.

The desire for loot is the most frequent and most universal incentive for crime among individuals as it is among nations. Even if one does not participate directly in the looting operation, he may be quite thrilled to accept the proceeds of someone else's criminality at a bargain from some intermediary. One is not much concerned about the past history of cheap import goods, for example. . . . An opportunity for applied incentive can carry one back to the jungle in one easy step.

Will Human Nature Change?

Human nature, which evolved through millions of years of struggle, competition and conniving under conditions of scarcity and insecurity, cannot be trusted in the presence of an opportunity and incentive to 'commit crime.' So, the answer to crime is not to be looked for in an improvement of human nature. In that direction, effective results could be anticipated only from a long-term eugenic program of selective breeding of humans.

Attempts to reform human beings by moral persuasion have never been effective for any considerable number of people over an extended period of time, even when reinforced with promises of reward and threats of reprisal by supernatural 'powers.' The Dark Ages of Europe were among the most pious, superstitious, and moralistic of all time and, also, among the most corrupt and criminalistic. In modern America, the highest crime rate is among those who pretend to be most moral. . . . Those who claim to be most patriotic are the ones most likely to commit excesses in the 'regulation' of others.

The application of legal codes to human control have not eliminated or even greatly reduced crime, as is obvious from the perusal of any daily newspaper; for, among other things, this would require an administrative and enforcement personnel that was strictly disciplined and incorruptible. Under the vigilance of the F.B.I., the crime record of the United States has grown steadily worse. Every city has its organized and unorganized criminality covering every stratum from the highest political office to the homeless bums on the streets.

A Technological Problem

The first approach to the problem of crime, if it is to be effective, must be through the elimination of the incentives and opportunities for committing crime. Only secondarily, must it deal with the individuals directly. Let it be treated as a technological problem rather than a moral or legal problem.

The great majority of human beings are quite willing to lead peaceful lives and to respect the lives and circumstances of others if their basic animal requirements are reasonably well satisfied and if they are accepted at par by the community. The fact that American society is as tranquil and orderly as it is today attests to the validity of this generalization. If opportunities for gypping their fellowmen are not readily available to them, most people will not go out of their way to create them. The compulsive criminal element is a small minority.

A considerable amount of crime, as defined by statute law, is committed by people in desperate need. They steal, pilfer, or rob to provide themselves with basic necessities. Hungry people and cold people feel an urgent need to provide themselves with food and comfort at any cost. This particular part of crime could be eliminated with a social program which would provide each individual with the ordinary means of livelihood. However, this solution is frowned on by the diehards of the Price System. They call it socialism, which to them is another word for wickedness. They insist that it contravenes the 'natural law' of survival of the fittest. But the social technologist regards an adequate livelihood a 'must' for all citizens.

Most of the remainder of crime is committed by predatory persons and go-getters whose dominant personality trait is greediness. Those with sufficient capital to start a corporation are able to operate within the law; those who are without such capital try to 'get ahead' by parasitic or criminal means.

A small fraction of the prevailing criminality is due to psychopathic causes. Sometimes this arises from hereditary tendencies, for example, kleptomania. Sometimes it is induced by chemical means, such as dope or alcohol. Psychopathic tendencies to anti-social behavior can be detected in individuals at an early age; and such individuals can be kept under observation and treatment and, if necessary, segregated from the general population. Only neurotics of another sort would insist on their being given free rein in the society until they commit some statutory crime.

In an advanced social order, all citizens should expect to be made safe from the criminal conduct of others. Those who are born into the society should expect an opportunity to live out their full lives. All citizens should expect freedom to move without being assaulted, robbed, or molested. They should expect to reap their social heritage without danger of being 'taken' by economic predators. They should expect to be protected from physical danger, diseases, and other health hazards. They should expect opportunities for privacy, serenity, and relief from those who insist on being rowdy, mischievous or otherwise obnoxious. They should expect their living quarters and personal effects to be secure from pilfering and vandalism.

The social order of North America does not fully meet these expectations; nor does it fully regard all of them as valid. Further, the major offenders are not even treated as criminals—businessmen, shakedown artists, insurance salesmen, financiers, landlords, and politicians. These are free to prey on others with only minimal restraint.

The Price System has adequately demonstrated its incompetence to abolish crime. In fact, crime is an essential feature of Price System operations.

A Technocratic Solution

In a Technocracy, crime would virtually disappear for lack of incentives and opportunity. With the elimination of money and commercial enterprise, crimes of gain at the expense of others would vanish. When one cannot profit from another, be it from stealing, gambling, employment, inheritance, or dealing, there will be no incentive to promote, or take advantage of, the misfortunes of others. People can then regard others as human beings and not as 'pigeons.'

Since there will be an abundance of goods and services available to all, ostentatious waste, status seeking, larceny, and other related forms of anti-social conduct of an economic nature will be without significance or advantage. No crimes will be committed out of need.

Crimes of passion and adventurism, which are not of economic origin, also will become virtually extinct. Most of these that now occur would be curtailed through effective control of narcotics and strong stimulants on the one hand and routine observation of emotionally unstable neurotics on the other hand.

Thus, without changing human nature, the social technologist will be able to accomplish that which superstition, moralism, legalism, and etiquette have never been able to achieve. The one factor which contributes most to crime—scarcity—need no longer be a menace to human tranquility and welfare on our Continent. But the abolition of scarcity cannot be reached under the Price System. The Price System requires scarcity in order to operate. For example, the agricultural program of the United States is one of curtailing embarrassing abundance and the maintenance of scarcity and price values.

Only Technocracy has the design and operating characteristics for effecting a tranquil social order on a Continental area.

It is to be expected that the compulsive go-getters, predators, and other components of the criminal element will resent Technocracy, for it will expunge their rackets. But all 'decent citizens'

will welcome it with enthusiasm once they realize what it means to them.

Technocracy makes no claim of being a moral order or a social utopia; neither is it a racket. It is a simple technological design for operating the Continental society of North America under circumstances of abundance and automaticity. It is a design that is unique in the world, never having been tried anywhere in the past and not being applied anywhere in the world at the present time. Yet, no technologist who has examined it, and whose mentality is capable of being freed from the value concepts of the Price System, doubts that it will work. Neither can one doubt that it is the final solution to the problem of crime.

—Wilton Ivie

There Ought to be a Law

Dear Senator:

I see where the government is trying to make the people in the south let the Negroes have equal rights with the Whites, like riding on buses, eating in restaurants, and going to the same schools. I guess it's all right in principle, because Negroes are people and they should have the same rights as people. With all this discrimination in the south, the Negroes are moving up north and whole sections of our cities are getting to be solid Negro, which, it seems to me, is sort of segregation also. In fact, some Negroes are moving out into the suburbs where I live and the neighbors are getting all upset about it. Some of them say they're not so worried about a few Negroes, but they don't want them to take over the whole neighborhood like they have done in some places.

Now, I have been thinking about this a lot and I have an idea which ought to work. All you have to do is pass a law that says no neighborhood can be more than one-fourth Negro; and, if there are no Negroes in some places, they should be permitted to move in when places are for sale or rent, but no more than one house in five. In that way, Negroes and Whites would get used to each other and everybody would have the same 'problem,' not just the south. Of course, there are a lot of people who are only half or one-quarter Negro, so I don't know just how you would handle them. It seems to me that, since our country is made up of both Negroes and Whites, as well as in betweens, we should try to get along with each other.

Sincerely yours,

BEETAL BRAYNE

P.S.: Of course, there will be some die-hards who won't want to be integrated but I think most of us will get used to it in time. For awhile, maybe you could let some of the die-hards live in segregated communities until they die off, but they shouldn't be allowed to have any Negro servants in those places.

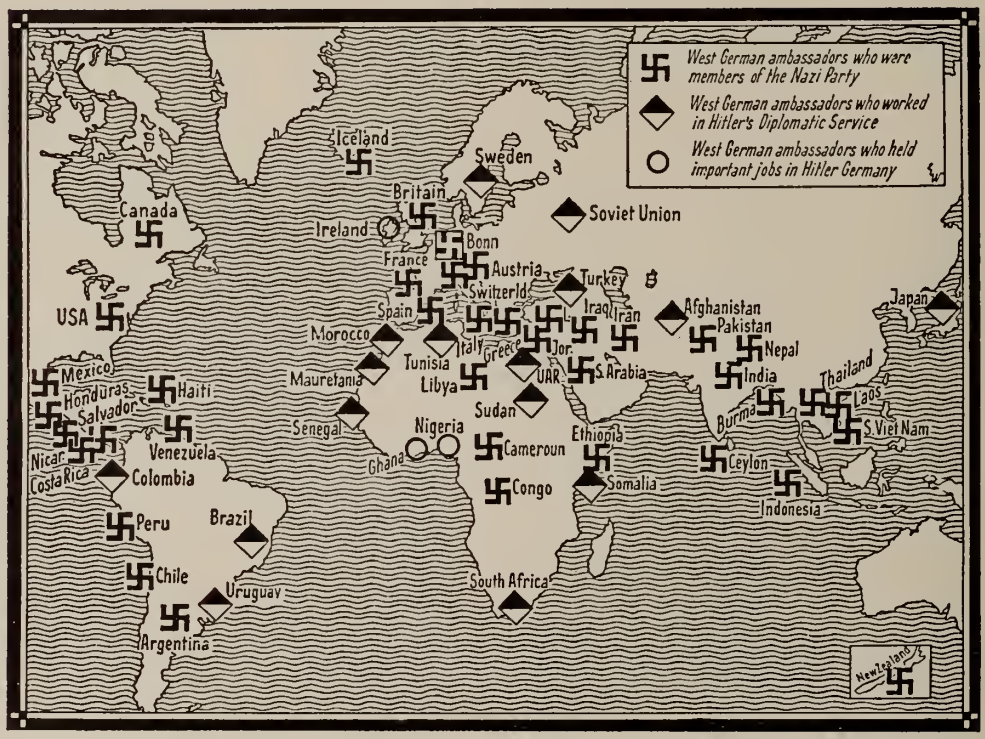
In a report to President Kennedy, Rep. Holland asserted that automation had eliminated 25% of the nation's jobs in the preceding five years and that it would wipe out another four million in the next four years.

—Kiwanis Magazine, Jan.

Los Angeles Times, Jan. 6, Sylvia Porter column—The richest 1% of American adults now holds 27-28% of the entire nation's personal wealth. The richest 1% holds 76% of the total of corporation stocks outstanding.

FACISM GROWS IN WEST GERMANY

The Nazi Diplomatic Corps of 1962



The January 19, 1962 "Democratic German Report," a publication appearing in East Germany, published a long list of present West German ambassadors who allegedly were members of the Nazi Party, who worked in Hitler's Diplomatic Service and/or held other important positions in Nazi Germany. We reproduce here a condensed version of that list. The accompanying map indicates the present ambassadorial assignments of these West German diplomats. The swastika in the West German capital of Bonn marks the Foreign Ministry, headed by Dr. Gerhard Schroeder, allegedly a former Nazi Party member and Storm Trooper.

In anticipation of the reaction of the apologists for the West German regime, the "Democratic German Report" envisaged that "they will go through it (the list) with a magnifying glass, looking for any possible minor errors; if there is an Ambassador Hanns Schmidt, and we have spelt his name Hans Schmidt, then they will howl that the whole thing has been shown up as another baseless Red Plot to denigrate the lily-white democracy of West Germany."

Instead of such petty diversionism, a factual and pertinent airing is in order. To further it, we sent the telegram, reproduced on the next page, to the West German Ambassador to the United

States, Dr. Wilhelm Grewe. Ambassador Grewe is alleged to be the former member No. 3,125,858 of the Nazi Party. He did not respond to our telegram. It is credible that self-incriminating silence, which still leaves room for reasonable doubt, is viewed by the West German Ambassador as preferable to a manly confirmation of his Nazi past. Certainly, a denial would be viewed by him as preferable, if such a denial could validly be made. Our readers will draw their own conclusion from the lack of response to our telegram.

The source of the material published here is an East German publication. It is probable that it is a Communist source. This does not indicate unreliability. Anybody who suggests that the East German origin of the information renders discussion of it unnecessary is indulging in manipulative diversion. The Minority of One will be glad to publish any factual denial, confirmation, correction or comment on the information, from any official American or West German source. Should no contradictory statement be forthcoming, there will be no choice but to assume that the unchallenged information is correct. (Editor)

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AMBASSADOR WILHELM GREWE
EMBASSY OF THE FEDERAL REPUBLIC OF GERMANY
WASHINGTON, D. C.

MARCH 19, 1962

THE EAST GERMAN "DEMOCRATIC GERMAN REPORT" OF JANUARY 19TH REFERRED TO YOU AS, AMONG OTHERS, THE FORMER MEMBER NO. 3,125,858 OF THE NAZI PARTY. WE SHOULD APPRECIATE YOUR DENIAL OR CONFIRMATION OF YOUR FORMER MEMBERSHIP IN THE NAZI PARTY AND ANY COMMENT YOU MAY WISH TO MAKE.

M. S. ARNONI, EDITOR
THE MINORITY OF ONE
77 PENNINGTON AVENUE
PASSAIC, NEW JERSEY

AFGHANISTAN
Dr. Hans Schmidt-Horix:
Member of Hitler's SS troops.

ARGENTINA
Dr. Werner Junker:
Nazi Party Member No. 2,549,901 (joined in 1935).

AUSTRALIA
Dr. Hans Muehlenfeld:
Headed the neo-Nazi German Party in the West German parliament in 1949-1953.

AUSTRIA
Dr. Friedrich Janz:
Candidate Member of the Nazi Party.

BRAZIL
Dr. Gebhard Seelos:
Nazi diplomatic service.

BRITAIN
Dr. Hasso von Etzdorf:
Nazi Party Member No. 3,286,356 (joined in 1933); Nazi diplomatic service; Secretary to Nazi Foreign Minister von Neurath; Lieutenant Colonel in Hitler's Storm Troops (SA).

BURMA
Elgar von Randow:
Nazi Party Member No. 5189 (joined in 1925); Nazi diplomatic service.

CAMEROUN
Dr. Hennig Thomsen:
Candidate Member of the Nazi Party; sergeant in the SS.

CANADA
Herbert Siegfried:
Nazi Party Member No. 4,009,260 (joined in 1937); Nazi diplomatic service.

CEYLON
Dr. Theodor Auer:
Nazi Party Member No. 3,398,113 (joined in 1934); Nazi diplomatic service.

CHILE
Dr. Hans Strack:
Nazi Party Member No. 3,752,096 (joined in 1936); Nazi diplomatic service.

COLOMBIA
Dr. Anton Mohrmann:
Nazi diplomatic service.

CONGO (Leopoldville)
Dr. Kurt Munzel:
Nazi Party Member No. 1,494,847 (joined in 1933); Nazi diplomatic service.

COSTA RICA
Heinrich, Count von Hardenberg:
Nazi Party Member No. 2,587,251 (joined in 1933); Nazi diplomatic service.

ETHIOPIA
Paulus von Stolzmann:
Nazi Party Member No. 3.286,389 (joined in 1933); Nazi diplomatic service.

FRANCE
Herbert Blankenhorn:
Nazi Party Member No. 6,977,147 (joined in 1936); Nazi diplomatic service.

GHANA
Dr. Carl Heinz Lueders:
Senior judge in Nazi military service.

GREECE
Dr. Wilhelm Melchers:
Nazi Party Member No. 7,077,242 (joined in 1939); Nazi diplomatic and espionage services.

HAITI
Kurt Luedde-Neurath:
Nazi Party Member No. 4,745,122; Lieutenant in the Storm Troops (SA).

HONDURAS
Hans Joachim Knight von Reichert:
Liaison officer between Ribbentrop and Mussolini.

ICELAND
Hans-Richard Hirschfield:
Nazi Party Member No. 3,715,319 (joined in 1936); Nazi diplomatic service.

INDIA (and NEPAL)
Georg Ferdinand von Duckwitz:
Nazi diplomatic service. (Believed to be the only West German diplomat who helped Jews in Europe during the war.)

INDONESIA
Baron Dietrich von Mirbach:
Nazi Party Member No. 2,731,405 (joined in 1933); Nazi Ambassador to Roumania.

IRAQ
Dr. Werner von Bargen:
Nazi Party Member No. 2,579,492 (joined in 1933); Nazi diplomatic service.

IRAN
Baron Dr. Reinhold von Ungern-Sternberg:
Nazi Party Member No. 2,594,983; Member in the Nazi Storm Troops; Nazi diplomatic service.

IRELAND
Dr. Adolf Reifferscheidt:
Nazi managing director of Cologne Chamber of Commerce.

ITALY
Dr. Manfred Klaiber:
Nazi Party Member since 1934; Nazi diplomatic service.

JAPAN
Dr. Wilhelm Haas:
Nazi diplomatic service.

JORDAN
Conrad von Schubert:
Nazi Party Member No. 3,281,493 (joined in 1933).

LEBANON
Dr. Hans Hugo Rupprecht Schwarzmann:
Nazi Party Member No. 3, 151,913 (joined in 1933); Nazi diplomatic service.

LIBYA
Dr. Ludwig Beye:
Nazi Party Member No. 2,531,036; Nazi diplomatic service.

MEXICO
Dr. Kurt-Fritz von Graevenitz:
Nazi Party Member No. 8,735,119 (joined in 1942); Nazi diplomatic service.

MOROCCO
Dr. Herbert Mueller-Roschach:
Nazi diplomatic service.

NEW ZEALAND
Dr. Herbert Niehring:
Nazi Party Member No. 4,009,261 (joined in 1937); Nazi diplomatic service.

NICARAGUA
Dr. Hans Wolf Jaeschke:
Nazi Party Member since 1937; corporal in the Storm Troops.

NIGERIA
Dr. Herald Count von Posadowsky-Wehrner:
Director of Economic Questions in Goering's Ministry of Aviation.

PAKISTAN

Dr. Baron Heinz Julius Hugo Truetzschler von Falkenstein:
Nazi Party Member No. 8,183,952 (joined in 1940); Nazi diplomatic service; author of Nazi "White Papers."

PERU

Dr. Heinrich Northe:
Nazi Party Member No. 3,604,851; Nazi diplomatic service.

EL SALVADOR

Prince Alexander zu Solms-Braunfels:
Nazi Party Member No. 1,440,443 (joined in 1932); Member of the SS; Nazi diplomatic service.

SAUDI ARABIA

Oswald, Baron von Richthofen:
Nazi Party Member since 1932; Member of the SS; Nazi diplomatic service.

SENEGAL (and MAURETANIA)

Dr. Walter Reichhold:
Nazi diplomatic service.

SOMALIA

Dr. Wilhelm Kopf:
Nazi diplomatic service.

SOUTH AFRICA

Karl Kuno Overbeck:
Member of the Storm Troops (SA); Nazi diplomatic service.

SOUTH VIETNAM

York Alexander Baron von Wedland:
Nazi Party Member since 1933; Nazi diplomatic service.

SPAIN

Wolfgang Baron von Welck:
Nazi Party Member No. 2,549,805 (joined in 1935); Nazi diplomatic service.

SUDAN

Heinrich de Haas:
Nazi diplomatic service.

SWEDEN

Dr. Carl Werkmeister:
Nazi diplomatic service. (Implicated in pogrom of 13,000 Jews in occupied Yugoslavia).

SWITZERLAND

Dr. Ernst-Guenter Mohr:
Nazi Party Member No. 3,500,174 (joined in 1935); Nazi diplomatic service.

THAILAND (and LAOS)

Dr. Hans Bidder:
Nazi Party Member since 1941 (candidate since 1935); Nazi diplomatic service.

TUNISIA

Dr. Herbert Richter:
Nazi diplomatic service.

TURKEY

George von Broich-Oppert:
Liaison man for Nazi underground in Vienna at the time of the murder of Dolfuss.

U.S.S.R.

Dr. Hans Kroll:
Nazi diplomatic service.

UNITED ARAB REPUBLIC

Dr. Walter Weber:
Nazi diplomatic service.

UNITED STATES

Dr. William Grewe:
Nazi Party Member No. 3,125,858 (joined in 1935); wrote articles for semi-official Foreign Office publication glorifying Nazi aggression and opposing German adherence to the Geneva Convention for prisoners of war.

URUGUAY

Dr. Otto Eberl:
Nazi diplomatic service.

VENEZUELA

Dr. Carl-August Zapp:
Nazi Party Member No. 2,717,559 (joined in 1933); Nazi diplomatic service.

NATO

Dr. Gebhardt von Walther:
Nazi diplomatic service.

OEEC (Organization for European Economic Cooperation)

Dr. Carl Hermann Mueller-Graaf:
Nazi diplomatic service.

—Reprinted by permission from The Minority of One, May 1962

The Incredible Things THE THINKING MACHINES are doing for us—and to us

The most important thing happening in the world these days, the thing that will bring forth the greatest changes, may easily turn out to be the astounding evolution of the electronic computer and man's dawning discovery of how to use it to improve his life. The familiar electronic "brain" of countless newspaper items, the whirring and flashing election-night television performer that predicts final results from scattered early returns, is already leading us toward better health and education and tremendous new achievements in science. It is also leading, in the opinion of many and perhaps most economists, toward shorter hours and higher earnings, undreamed-of leisure and abundance. But there are dissenters who warn bleakly that it could cost millions of us our jobs. Whether the optimists or the pessimists are right, we are plainly entering an age of computers.

While these devices were first used a generation ago, their dazzling versatility and incredible new tricks have distracted us from their real meaning in terms of human history.

Most of us still find it hard to comprehend—and harder to believe—what computers can do. They can, for example, see, read, type, print. They are learning to understand oral instructions and to talk. They can translate languages, play chess, compose music of a sort, and in half a minute solve an equation on the movement of the moon so difficult that it would keep a brilliant mathematician busy for years.

They Eliminate Work Miraculously, BUT . . .

One of them smoothed John F. Kennedy's path to the White House by analysing the wishes of the voters, and during the shopping rush last Christmas in department stores in the American cities of Philadelphia and Dallas and the Japanese city of Nagoya, you could ask computers what to buy for whom. You indicated on a card the age, sex, relationship and hobbies of the person you sought the gift for. An operator fed the card into a computer and out came a list of ten suggestions. In Philadelphia a man asked what would be suitable for a ninety-year-old woman ski jumper who had just had twins. After cogitative hum and a blink or two of surprise the computer typed: "This is a very unusual subject. You produce the subject and we'll produce the gift."

A cartoon in the February issue of Esquire shows a computer breaking the news to its operator that it is having a baby, and computers do, in a sense, propagate. Without yesterday's computers today's couldn't have been designed, and today's are designing those that will replace them tomorrow. While this is as close as a machine can come to reproducing itself, it is much less impressive than the computer's imitation of genius engaged in cerebral toil.

Can computers think? Most experts snort derisively at the idea and profess annoyance with the phrase "electronic brain." But at the 1961 Eastern Joint Computer Conference at Washington in mid-December, which drew 4,000 delegates, Dause Bibby, president of Remington Rand and one of the top men in the profession, declared:

"Every major executive decision must be detected, correlated, analyzed and evaluated. The penalty for bad guesswork can run into millions of dollars. . . . Yet humans are both too limited and too lazy to cover every alternative, and their 'experienced hunch' frequently lets them down. A tireless computer, on the other hand, can screen thousands of possible solutions and plot a vector course to the right one. Of course, effective decision-making can only be the result of well-organized, clear thinking. I realize I am raising the question: can computers think? Since I have done it, allow me to word my answer this way—I 'compute' they can."

At the same conference in Washington a seventeen-year-old Maryland prodigy named David Malin told of using some of the findings of neurosurgery to instruct or "program" a computer to

act as though it could reason. He said man, as he learns more about his own brain, will endow computers with more "artificial intelligence."

Whether or not computers can think, there is no argument about the fact that they have taken over in vital fields of manufacturing, finance, trade and government, are today's key research tool, are our most advanced symbol of automation, and are at the point of wide acceptance in law, medicine and education.

There are 6,000 to 9,000 of them in the United States now—no two estimates agree—and 200 to 500 in Canada. Western Europe from 1,500 to 2,000; Japan has 300;Russia surely has hundreds and may have thousands.

Do They Also Eliminate the Workers?

One American authority on computer technology says there will be 50,000 of them on this continent by 1970. Whole corporations are being organized around them, or "computer oriented," and production lines are being retailored. With both sides of the international boundary plagued by unemployment in the midst of prosperity, computers have been hailed on the one hand for their benefits, but viewed on the other hand with suspicion, fear, and worry. In late January, the Center for the Study of Democratic Institutions at Washington issued a booklet by Donald Michael, who lumps computers and automation under the fairly new word, "cybernation," and says that in the next twenty years cybernation will wipe out entire categories of jobs ranging from farm and factory workers to bank tellers and middle management executives. Michael adds: "If our democratic system has a chance to survive, we shall need far more understanding of the consequences of cybernation . . ."

Few men competent to judge the situation are talking like Michael and pushing the panic button. for computers, while displacing people in some jobs, are displacing them in much smaller numbers than most anticipated.

Ted Silvey of the AFL-CIO research staff at Washington formerly believed computers would reduce office employment "in spectacular and tragic degree." They haven't done this, he says. although they have forced some industries to refrain and in some cases replace workers. What they have done is multiply by from five to fifty-five times the data a work force can handle. Silvey new believes that over the next five years office employment will rise slightly, not decline, due to the enormous demand for information, and clerical help will rise in the economic scale.

In manufacturing there are areas where computers will complete what less sophisticated forms of automation began, emptying them of all but a handful of employees. The workmen who are left will be white-smocked highly paid technicians patrolling decorative console boards. But Silvey points out that computers are best fitted to run continuous processing plants like pulp and paper mills, petroleum refineries, steel mills and distilleries, and that such plants are heavily automated already, so that they have relatively few production workers left.

The over-all loss of old jobs that computers are causing is, to an extent, being offset by the new jobs the burgeoning young computer industry is creating, and the "help wanted" ads in the newspapers reflect the eager hunt for skilled computer professionals: circuit designers, operation analysis mathematicians, programer analysts and the like. Electronics Magazine claims the U. S. computer production in 1961 was worth $964,000,000 and that it will reach somewhere near $1,400,000,000 in 1962.

They range in size from giants that weigh tons to compact models that fit comfortably into a modest office. Many are leased, rather than sold, and in Canada the rent is as much as $135,000 a month and as little as $350, with the monthly rental equaling a forty-eighth of the purchase price. There are data processing centers where you can hire part-time computer services.

There are two main types of computers—analog and digital. The analog is chiefly for scientific and engineering purposes; it measures speed, motion, heat, pressure and other physical properties by converting them into electrical impulses and shows the measurements on graphs, charts or on oscilloscope screens. The digital computer is basically a counter. What sets both types above and apart from other machines is their ability to store prodigious masses of information and process it as instructed into a form in which all the facts come together as a conclusion.

Data and instructions have to be fed into the computer in a language it understands—in the case of a digital computer, this as a rule is a mixture of digits, letters and symbols, fed in by typewriter, console keyboard, punched card reader, punched tape reader, or magnetic tape. The processed data emerges from the digital computer via typewriter, card and tape punches, magnetic tape and printers that can print up to 5,000 lines a minute. Lately, I've examined the insides of a dozen computers and had them explained to me

by engineers who talked numeric bits, the binary system, the alphanumeric system, floating point arithmetic, flow diagrams, macro-instructions, mnemonic code, load point markers, one-gap heads and similar mysteries—and which remained mysteries to me. Surprisingly, though, the innards looked deceptively simple — tiny ferrite cores strung on hair thin wires, metal drums and discs, transistors, tubes.

How do they work? Pretty much like your brain. Your brain has billions of neurons that hold bits of information stored in them by your five senses and each information-bearing neuron is interconnected with every other information-bearing neuron. In a computer the ferrite cores and magnetized dots on the drums and discs are the neurons, and bits of data are stored in them by electrical signals from the human programers. All the cores, all the dots, are interconnected by the circuitry.

When a computer is asked a question it summons its stored knowledge into play to help answer, searching its memory cells with the speed of light. Occasionally, there are newspaper stories about computers running amuck and odrering millions of dollars worth of goods—military goods as a rule—by mistake. Actually, computer scientists told me, a computer never makes a mistake. The mistake is always that of a human operator who feeds it wrong information. It can't run amuck—if a wire breaks or a memory core is destroyed this sets off an alarm system—and is corrected by a built-in checking system if it misreads a digit.

A Swiss mathematician and skin-diver named Hannes Keller staked his life on the infallibility of a computer. With a Swiss physiologist, he derived a secret breathing mixture. He felt this would let him dive very deep and surface quickly without getting the "bends," the painful and even fatal affliction that smites divers who come up too fast. He programed a computer with information on the pressure of the ocean at different depths, the physiological reaction of human lungs under pressure, the effect of this on the blood, and the counter effects of the gases in his breathing mixture. He then instructed the computer to work out a decompression table and test it. The computer, in a theoretical sense, took the first dive itself. Then the diver dived, successfully, and rose to the surface without bends and sputtering that he would bet his life on a computer any day. Now he is continuing his diving research with the support of the U. S. Navy, which presumably, "will acquire rights to his breathing mixture, whatever it is."

You may not understand how computers do it, but the veriest layman can be fascinated by what they do. By following day-to-day retail sales, they can anticipate style and color trends, and the owner of a chain of women's shops got the jump on competitors and profited handsomely one season by acting on a tip from a computer that purple would be the rage—which it soon was.

They can tell oil companies where to build new service stations and one of them, consulted by a real estate promoter, advised him to put up a shopping center in an extremely unlikely tract of pasture land. Before the center opened, a highway had bisected the land and houses were springing up in all directions.

When it comes to answering questions, computers are not only accurate but patient and tireless. At an exhibition in Moscow in 1959 by International Business Machines Corporation computer which had digested 1,000,000 words of information about the U. S. was one of the principal attractions. It answered, in Russian, thousands of queries about America from Muscovites who queued up in front of it night and day for six weeks. At the 1961 Italia exhibition at Turin the same kind of computer answered the same kind of questions in four languages.

A computer in Washington can, within seconds, look up the benefits and side effects of any of the 8,600 different prescription drugs marketed by pharmaceutical firms, and provide quick answers for doctors who telephone from every state in the union.

Computers can pick the right people for tough jobs. No matter how extraordinary a mission may be, there are men in the American armed forces qualified to undertake it; the Pentagon, with computer assistance, can locate them immediately. When the U. S. was choosing its astronauts a computer provided the names, physical and mental ratings and school and service records of candidates who were worth considering, narrowing the field from thousands to scores although human judgement determined the final selections.

There seems, indeed, to be no end to what computers can do. They can gauge the rise in thirst during a summer heat wave and there are places, Toronto among them, where they tell brewers how much extra beer to deliver to which outlets. They

gauge consumption for ice-cream makers, too, telling them how much of each flavor will be needed and how much of each ingredient to measure out for a batch of the right size. They devise recipes by which sausage makers, without impairing the taste or quality of their product, can vary what goes into it, holding costs down by using more of what is cheapest at the moment and less of what is most expensive.

There are computers that can operate the largest and most intricate machine tools. They record bank transactions, process and compile census data, handle family allowances and pension checks, issue bills for credit card purchases. There's even a truck-mounted computer named Informer that can take charge in a theater of war, plotting logistics, tallying casualties, ordering reinforcements and supplies, firing guns and ballistic missiles. When not more urgently occupied, Informer posts the payroll entries and fills out checks.

At the IBM research center at Yorktown, N.Y., I saw a computer that can translate Russian into English at the rate of 2400 words a minute. The translation is crude, as yet, and shades of meaning are missed. A saying like "The spirit is willing but the flesh is weak" could, in translation, emerge as "The whiskey is strong but the meat is bad." But the computer-translator is being constantly improved and can give an understandable rendition of Russian scientfic papers, political speeches and news stories. Meanwhile another computer, at Georgetown University in Washington, under a grant from the U. S. Central Intelligence Agency, has translated nine Russian technical books. The Russians, similarly, are translating into Russian by machine, and the Japanese are translating English textbooks. It appears certain that worthwhile scientific texts and literary works will eventually be readily and cheaply available, courtesy of computers, in all major languages.

How will libraries accommodate the mighty flood of books? By a computer-controlled system of document reduction, storage and retrieval, by which a document can be reduced to less than a thousandth of its original area, tucked away and, when wanted, be located in seconds. Who'll read so many books? Nobody. But computers can scan them at a terrific clip and cross-index the subjects they cover so that anybody interested in a particular subject will know where to look.

Here are things computers are doing or about to do in other fields that affect us all:

Law. Law research computers have been developed. Information is fed into them by subjects—divorce, auto accidents, murder and so on—and they provide, in minutes, citations and statutes that apply to a specific point of law and that it would otherwise take a lawyer hours or days to dig out. These machines are expected to help lawyers serve the public better and perhaps cheaper. Judges will use them too, in the preparation of judgements, so they may ease the strain on overloaded courts.

Medicine. U. S. public health service experiments have shown that computers can diagnose heart ailments by comparing wave forms in an electrocardiograph with normal and abnormal wave forms the machines have already "memorized." In time this will make possible the mass screening of children and adults for hidden heart disease. Computers are now being used to trace certain inheritable diseases by analyzing palm prints. They are analyzing brain waves to help scientists detect mental illness, and have enabled an analysis of a mass of data on inherited traits.

Education. Progressive schools have not only begun to teach with computers but to teach about them, for they recognize that a knowledge of computers is getting to be essential. In Washington pupils nine, ten and eleven years old have actually tried programing computers, and a regular programing course is being started at Cedarbrae secondary school, near Toronto.

Computers, of course, have for years been a research instrument at universities. The University of Toronto's first one calculated water levels along the proposed St. Lawrence Seaway in 1952—a study on which engineers based the design of the waterway. Now the U. of T. is awaiting its third and best, a $3,000,000 piece of IBM hardware 300 times faster than the one it's now using. Today the larger universities use computers for their own administration requirements, and for business courses, as well as for research.

Science. The 1,500,000-pound Saturnbooster is being theoretically fired thousands of times inside an IBM 7090 data processing system, the kind Toronto University has on order. The cost of sending a multi-ton Saturn payload around the moon in this manner is $300, compared with millions of dollars for an actual flight. Werner von Braun, Hitler's buzz-bomb expert now engaged in the Saturn project, has said that hundreds of experimental buzz-bomb flights had to be made to obtain the data that would now come from a computer before a flight was ever attempted. This is not surprising. Computers can imitate in mathematical

theory a busy street at rush hour (for a traffic survey), or a blast furnace.

Defense. All western defense is based on computers — warning systems, the development of weapons, the direction of retaliatory attacks. Russia's defense is also based on computers, and without having excellent ones Russia would not have been able to achieve what it has in space.

Government. There are congressmen in Washington, and probably in Ottawa, who are in favor of computers that would help legislate—this by turning up duplications and inconsistencies in the law and indicating which laws should be changed. Ironically, legislative branch of the government is practically the only branch that doesn't already use computers extensively. U. S. economic planning is predicated on a computer that simulates the U. S. economy itself, no less, and reacts statistically to indices that are constantly fed into it—steel production, retail sales, freight car loadings, farm prices and the like. In Canada the Bureau of Statistics relies extensively on a computer for its economic reports, which serve as a guide for economic policies. In the U. S. the internal revenue department is now putting into operation a vast complex of computers from which tax cheaters will have very slim chances of escape. Every taxpayer will be a nine-digit number and there will be a master file with case histories of every individual and business, all of whom the machine will check relentlessly. The stake: an estimated $25,000,000,000 that taxpayers shortchange the U. S. annually. The psychological impact: with the system still being set up, droves of people are reported to be remembering slight and not-so-slight items of income they neglected to mention in their returns. What's happening in the U. S. is in store for Canada. The department of revenue is appraising tenders for a computer that would maintain a file on every Canadian taxpayer, and is hoping to get it in operation by 1963.

Computers, clearly, are touching our everyday lives in innumerable ways. At their most dramatic, they are helping man unlock the secrets of the universe; at their least dramatic, they gently hum and wink at the dull drudgery they are taking over from man. When they've mastered speech and hearing more thoroughly, as they will, they may even turn into office bores. But at least they'll be the kind that can be silenced by pulling a plug from an electric socket.

This article is reprinted by permission from "MacLeans" magazine published in Toronto, Canada. Its author is Ian Sclanders.

Emergency?

Responding to Latin American pleas of "emergency," the United States recently pledged $20 billion in aid during the next decade, in return for the promise of the countries involved that they would do everything possible to help themselves. Self-help, it was agreed, was the indispensable prerequisite of U. S. assistance.

At least that's what everybody said a month ago when the "Alliance for Progress" promises were swapped. Now comes a demand from the coffee-exporting countries of Latin America that the U. S. set up a special $150 million aid fund, and no nonsense about self-help. It seems that the recent emergency—actually, the Latins' desire for dollars—has given way to a "super-emergency," and Uncle Sam must put up the cash pronto.

Washington is reportedly stunned by this swift abandonment of solemn promises. But U. S. aid-givers haven't seen anything yet. If mere emergency can become "super-emergency" in the space of a month, they can expect a "super-collosal, emergency" next month.

Wall Street Journal, 10-25-61

Swelling government complicates Kennedy's economy efforts.

Federal payrolls tend upward. A building binge is on, any quick reversal seems impossible, though some individual agencies make minor cutbacks. Government employment, above 2.4 million, has risen 75,000 since Kennedy's takeover. A seasonal drop leaves the total well above year-ago heights. Sharp year-to-year job rises come in military agencies, the Interior Department, Forest Service, business regulatory commissions.

The Government builds or plans 34 new buildings in Washington and suburbs alone; other projects sprout across the land. The Government snaps up private office space in Washington, leasing suits in five new buildings since January.

Cabinet members, agency chiefs hanker to hire more economists. The Federal Aviation Agency will need still more air traffic controllers as new navigation aids go on duty.

Wall Street Journal, 11-3-61

The UDM Orthomat automatically translates complex mathematical formulae defined on punched or magnetic tape into accurate engineering drawings at speeds up to 200 inches per minute. It is designed to operate independently or as an integral part of total engineering systems, correlating with other numerically controlled data, production and inspection machines.

Invaluable for lofting, large scale drafting, scribing, plotting and tape verification, the Orthomat is a coordinate, continuous-line contouring plotter, drawing on paper, vellum, cloth, mylar or metal, up to 60" x 144". The Orthomat system is composed of (1) a numerical control director to supply command pulses and (2) a drafting machine with complete control for all motions of a variety of scribing devices.

In conjunction with the Orthomat the same tape used with a Gorton rail-type milling machine will produce the part drawn.

Saskatoon Star, Phoenix, Oct. , 1961

U. S. Senator J. W. Fulbright has told a press conference the West is not entirely blameless for development of the Berlin crisis.

The Soviet Union is not the only culprit, the Arkansas Democrat said, and went on: "We bear heavy responsibilties for the stupidities of this situation, which is to my shame, as it is to anyone in the west."

Senator Fulbright, chairman of the senate foreign relations committee, was here as an observer at the British Commonwealth Parliamentary Conference, which discussed the projected entry of the United Kingdom into the European Common Market.

Fulbright said it is urgent, in weighing the Berlin crisis, to determine what the Russians mean by such terms as "free city" and "free access."

The Russians, he added, are with good reason concerned about the possibility that atomic weapons might be given to West Germany.

Asked whether atomic weapons should be given to West Germany, in any circumstances, the senator said the question does not arise now. Such weapons should be withheld from West Germany if there is a reasonable prospect of progress in reaching agreement with the Russians, he said.

"Supposing things get much worse than they are now . . . then you reach a different conclusion."

Fulbright then emphasized he was not speaking for the U. S. government, or outlining any official policy.

Comment: Informed Americans would agree with the Senator but our newspapers and radio have stirred up so much hysteria among the misinformed that sanity has disappeared.

RESEARCH BULLETIN

Automated Rolling Mill

Continental Copper & Steel Industries, Inc., recently dedicated a $3,000,000 copper rolling mill that is operated by only three men. The plant, located at Linden, N.J., forms rods 5/16 inch thick from 265-pound bars of electrolytic copper at the rate of 2800 feet per minute (about 250 miles per 8-hour shift). The three men present are an engineer who sets automatic controls and observes overall operation, and two workers who load bars onto a conveyor and remove finished rods. No human handling of the copper is needed from the time the bars are carried by the conveyor into the furnace until they emerge as rods. In a later operation the rods are drawn into wire. A company official has described the installation as being "one of the most highly automated and completely integrated facilities in the world for production of insulated wire and cable. Subsequent addition to this plant and a sister $7,000,000 insulating mill will comprise a wire manufacturing complex that is expected to be completed by 1970.

—Compressed Air, February 1962

The Arctic's Automatic Weather Grid

The first isotope powered automatic weather station is in operation in the Canadian Arctic. A dream of meteorologists for many years has been to obtain automatic weather observation from strategically located remote areas. Unfortunately, many of the desired locations are relatively inaccessible and to establish manned stations presents problems. An automatic weather station, capable of functioning unattended for two years, has been developed. Earlier difficulties, created by lack of a continuous power source, have been eliminated by the use of isotope power. The U. S. Atomic Energy Commission and the U. S. Weather Bureau spearheaded activity in the design and fabrication of equipment to provide reliability consistent with the long-life isotope, to use a minimum of electrical energy and to provide accurate weather data in usable form. The station underwent extensive tests in Baltimore, Md., before being transported to the Arctic site on remote, uninhabited Graham Island in the vicinity of Norwegian Bay, about midway between the Canadian weather stations at Eureka and Resolute. The station and power source are housed in a cylindrical, insulated container, approximately 8 feet long. The lower five feet are buried in the permanently frozen ground. Reliable and rugged meteorological instruments make their measurements, feed their findings into data processing system and emerge ready to go directly into a radio transmitter. This in turn relays them every three hours to receiving stations at Resolute and Alert. The power source is located in the lower chamber of the container and consists of a strontium-90 heat generator and thermocouples, batteries and a converter. Excess heat from the strontium-90 is used to maintain an interior temperature at about 70 degrees F.

—Compressed Air, February 1962

Advertising Costs the Consumer Nothing?

"American companies are spending over $11 billion a year on advertising—more than they spend on new construction. Appalling as it may seem, much of this money is spent without any clear idea of what benefits will be obtained and without any subsequent attempts to measure results. In fact, most companies have no idea of how much they really should be spending on advertising or what they should expect to receive in return."

So runs the first report of a four-part study by the National Industrial Conference Board which aims to "Assemble and evaluate all known methods of assessing advertising effectiveness." A massive, comprehensive analysis requiring two years of intensive research, the continuing NICB study involves the advertising practices of more than 300 United States and Canadian corporations. . . . Money is commonly appropriated for advertising with extreme laxity, most simply on the basis of a fixed percentage of sales or in conference with past spending habits. . . .

—Dunn's Review, March 1962

(Like rent, interest, taxes, overhead, etc., advertising is added into the cost of any product and whenever the consumer purchases the item he pays all the costs plus the profit. So when you buy any highly advertised item you can be pretty sure Madison Avenue got a good cut.)

Robots

The modern factory is nothing more than a shell around a complicated maze of production equipment. Only some 5% of the almost $15 billion that industry will spend this year on its new plants will go for actual brick and mortar and structural steel. Most of the rest will be spent for the vast range of machinery and materials handling equipment that so completely typifies American industry; no other nation in the world has for so long put such huge investment into its production plants in comparison to the number of men it employs in those plants.

—Excerpt from article in Dunn's Review, March 1962

(The production problem in America has been largely licked, and to keep from aggravating the already serious unemployment problems accruing from production it is essential that the problem of distribution be given a going over.)

* * *

Railroads Merge

No scandalous railroad deal between Morgan and Vanderbilt was ever consummated so secretly as the decision announced this week-end, to merge the New York Central and the Pennsylvania, the two ailing giants of the American railroad industry.

If, as their directors hope, they survive the vote of their stockholders, the demands of the railroad unions, and the scrutiny of the Interstate Commerce Commission and the Department of Justice, they will achieve the biggest corporation merger in American financial history, a pooling of huge assets beyond the dreams of the late Edward H. Harriman, who first launched the practice of having one railroad partially control another on the principle of "community of interests."

Together the "Pennsylvania New York Central Transportation Co.," as it is to be called, will control nearly $5.5 billions worth of assets, including just under 21,000 miles of track, 4,006 locomotives, 8,000 passenger carriages, 227,000 goods wagons, and 18 million share of stock.

—Manchester Guardian, January 18

Costs of Government (New York City)

City departments' requests for funds for 1962-63 exceed current year appropriations by $340 million. The Citizens Budget Commission, a private group, believes that despite higher real estate taxes there will be a $100 million gap between expenses and revenues next year. By 1965-66, this gap may spread to $365 million, even with more tax increases, the commission estimates.

"Something new is now involved," the citizens group says. "Never before have the demands for increased and new services seemed so formidable." Those who would limit the increases, it adds, are automatically put in the untenable position of being foes of better schools, police protection, hospitals and public transit

Because of the many demands, even the introduction of "Miraculous efficiency" probably wouldn't be enough to hold the city's costs in check, the report says, it estimates that in three years the city's annual budget, now $2.7 billion, will reach $3.3 billion, more than the U. S. budget itself in 1930.

—Wall Street Journal, March 8

* * *

Scientists oppose resumption of Nuclear Tests. Kennedy says we will proceed. Who do you think knows?

Washington (AP)—The council of the Federation of American Scientists said Tuesday radioactive fallout from the atmosphere nuclear tests will "almost certainly" cut short the lives of some people in this and future generations.

The council urged the United States not to resume atmospheric testing.

If the atmosphere tests are resumed, the scientists said, the government "owes an explanation of both the technical and political reasons for such a decision to the citizens of this country."

President Kennedy has ordered preparations for the in-the-air atomic tests but he said no decision has yet been made on whether to proceed with the explosions.

The Federation claims a membership of 21,000 scientists and engineers throughout the country.

The scientists' group gave these arguments against resumption of U. S. tests in the atmosphere:

1—The U. S. and Russia already have sufficient weapons to destroy each other and further development of atomic weapons will not alter this situation significantly.

2—If the United States refrains from atmospheric tests, it will deprive the Soviets of an excuse for resuming them after having completed their fall, 1961, series.

3—U. S. resumption of atmospheric tests would foster an impression among Americans that U. S. security can be maintained only by military strength, whereas true security "must ultimately be found in political arrangements to obtain stable peace."

4—The radioactive fallout from atmospheric tests will "almost certainly" cut short the lives of some people in this and following generations.

—Los Angeles Times, January 31

* * *

On the Right Track

There are encouraging signs that natural scientists are groping their way toward an effective role in practical politics.

This is long overdue.

The findings, potential application, and long term significance of the sciences often have a critical bearing on national and international decisions. Yet their influence on these decisions has been weak, if exception is made for the White House science advisers. The problem, in large part, has been due to the uncertainty of scientists generally as to what they should do.

Some have entered political debate in aid of specific causes. Their frequent neglect of objectivity has not contributed to public enlightenment.

Others have taken refuge in the fallacy that the camaraderie of international science could by itself be a path toward peace. Talks among East-West scientists and co-operative research have been poor catalysts for political negotiations.

There is a growing support within the American Association for the Advancement of Science for what sems to us a more constructive approach. It is based on two self-evident propositions.

As citizens, scientists have no special wisdom and are entitled to one vote each.

As experts, they are custodians of specialized knowledge of great public importance and have the duty to see that their fellow citizens are alerted to things they should know about and to the implications of these things.

This puts a professional onus on those who would use special knowledge as leverage for a certain course of political action. At the same time, it recognizes that international co-operation in research, as such, is politically neutral.

In this view, the most effective action scientists can take politically, is to work to build an informed public opinion.

Both formal and informal discussions at the recent AAAS meeting in Denver showed that this view is taking hold in the American scientific community. It suggests a growing political sophistication.

Some AAAS members go even further. It was they who issued the call for a "science of survival" reported during the Denver meeting.

They are urging scientists, wherever possible, to search out and work on scientifc problems related to maintenance of peace and establishment of human well being. The technical aspects of arms control are a case in point. They would carry the civic duty of scientists beyond that of merely informing the public as to current knowledge. They would include the generating of specific new knowledge whenever this seemed relevant.

Neither the AAAS nor the British Association for the Advancement of Science, which has also begun to think along these lines, has a coherent program for action. They are still groping. Nevertheless they seem at least to be switching the political responsibilities of natural science on to the right track.

—Hamilton Spectator from Christian Science Monitor, January 25

(While the scientists of the AAAS seem to be on the right track, it appears to all Technocrats that they have been remarkably slow on the uptake. The idea of Technocracy was conceived by scientists and engineers a quarter of a century ago to meet the conditions which are now on us and were apparent to them at the time of conception.)

* * *

The Merry-go-round

Uncle Sam surely has reached the ultimate in pyramiding government subsidies.

It's a good lesson for Ottawa on where subsidies can lead if they get out of hand. Here are the details:

For some years now, the U. S. farmers have been getting a subsidy for their cotton through high support prices. This has put U. S. cotton prices well above the world market rate. To keep the U. S. cotton export market, Washington then put a subsidy on exports of raw cotton.

This, however, brought complaints of exporters of U. S. cotton textiles. They were paying the going rate for their raw cotton which was higher than

the rate paid by their foreign competitors for U. S. cotton. So, Washington dipped into the treasury to provide another subsidy to cotton textile exporters.

Then the cotton textile producers in the U. S. started getting unhappy because the subsidized raw cotton exports from the U. S. were coming back into the country from such places as Japan in the form of textiles. Because the Japanese and others paid less for the raw cotton they got from the U. S., they were aided in keeping prices low.

To handle this problem, the White House has announced serious study is being given to a plan to raise tariffs on cotton textile imports as a kind of subsidy to the domestic textile industry.

Now this has raised howls in Japan and other countries. To handle this new problem, Washington is thinking of providing subsidies to the Japaness cotton textile exporters to make up for losses they may suffer if the U. S. does impose the higher cotton textile tariffs. It now is possible that other countries may seek similar compensation from Washington.

Thus: a subsidy to U. S. cotton farmers led to a subsidy to raw cotton exporters which led to a subsidy for cotton textile exporters which has led to serious consideration of a subsidy for cotton textile producers which has led to consideration of a U. S. subsidy for Japanese cotton textile producers.

Washington economists can argue persuasively that these subsidies make good economic sense, but one U. S. official told the FP: "When you think of it altogether, it does sound a little odd."

—Financial Post, December 30, 1961

(This really needs no comment from us.)

* * *

So, You Think You're Safe?

The young college graduate just starting his way up the success ladder and the $10,000-a-year executive who's 'almost there' may some day be made as obsolete as unskilled labor by automation, a private report warned Sunday.

But the forecast of massive unemployment reaching up through the American middle class because of "think" machines is only the start of troubles predicted by the report. It also foresees a time when U. S. democracy could erode into electronic dictatorship controlled by computers and a small elite group that knows how to run them.

The report, entitled "Cybernation; the Silent Conquest," is published by the Center for the Study of Democratic Institutions. The author is Donald Michael, former member of the Brookings Institution who is now director of planning and programs for the Peace Research Institute in Washington, D.C.

The Center, a non-profit educational research organization set up by the Fund for the Republic, notes in a foreword to the report the author alone is responsible for his views.

The report states that "unlimited" potentialities of computers and automated robot devices make their rapidly expanding use in American life inevitable.

Not only must many organizations automate to compete, but the same principle holds for competing nations," Michaels writes. "We are by no means the only semi-cybernated (automated) nation. Russia is making an all out effort to cybernate as much of its planning-economic-industrial operations as it can.

At first the so-called "blue collar" workers—unskilled laborers—will be hardest hit, Michael says.

But eventually, he maintains, automation will expand into service industries, replacing sales people, statisticians and even bank tellers.

As automation moves into managerial ranks—"and this move is already beginning"—growing numbers of "middle managers" will find themselves displaced, Michael predicts.

The lack of need for executives at the junior level also will represent a block to the ambitions of young college graduates and may return America to the problems of "the college graduate filling station attendant of not so many years ago."

. . . In summary, Michael foresees large masses of Americans—many of them highly educated—working only a few hours a day or drawing unemployment checks. A number will be employed by a greatly expanded government in massive public works programs. But the report calls these only "short term" solutions as automation continues.

Menwhile, "there will be only a small, almost separate society of people in rapport with the advanced computers," he says.

—Los Angeles Times, January 29 (UP)

(In recent times there has been no published article on automation which has stirred up so much editorial comment. As befits a Price System organization such as the Fund for the Republic, they have prepared an out in case the article backfires. They put the onus on its author. Technocracy Inc. is also a research and educational organization

delving into the same field but with no financial angel back of them. The findings have been much the same as Mr. Michael's but we have gone further and proposed solutions which up to now have been shunned by any Price System organization. Never has our organization had so much outside help in spreading a knowledge of current trends. We are pleased to have our analysis confirmed and wish they would take the final steps and steal our whole program.)

* * *

Peace, It's Wonderful

Salt Lake Tribune, Jan. 26—Utah's growing economic dependence on the nation's defense budget was brought before a committee of the Utah Legislative Council Thursday as a present boon and a potential hazard.

A "Peace Scare," members of the advisory committee on taxation agreed, could plummet Utah into a recession and raise havoc with the state's revenues. Important government services might suffer from a resulting drought of tax funds.

New York Times, March 4—A new attempt in Geneva next week to negotiate a world-wide treaty for general and complete disarmament has again raised the question of whether the U. S. could actually afford to disarm.

Ever since World War II, when huge military expenditures became an important element of the country's economy, the thought of their elimination from the federal budget has raised fears of a major depression.

The quick downward response of the stock market to "peace scares" has been symbolic of a widespread suspicion that even if the country wished to disarm and felt safe enough to disarm, it could not agree to disarm without risking financial chaos.

(It is plain to see, unless you are the type that needs a "brick house to fall on you, a brick at a time" that an economy that is on such a shaky foundation is not worth saving. There are so many things for America to spend their efforts on that would benefit Americans, that only a willfully Price System impregnated person will continue to plump for more defense spending.)

* * *

Things Are Getting Pretty Tough

Long Beach Independent, Jan. 23—An advertisement appears in this paper by The Liberty Loan Corp. saying they will loan from $30 to $70 to finance your 1962 license plates, to be paid back in monthly payments of from $1.50 to $3.53.

Long Beach Independent, Jan. 19—Washington (AP)—American education must be completely overhauled to met the challenge of automation, a labor official said Thursday.

Stanley H. Ruttenberg, director of research for the AFL-CIO said, "The specific skills of today will be obsolete tomorrow. There is already an obsolete curriculum in most of the nation's vocational schools, and certainly in much of the nation's general education."

There is literally no place in American life that will not feel the effects of automation in the 1960's, he said, "because a revolution in our economic and social life has been under way for a decade."

(The revolution has been going on ever since the First World War. The effects now are just more spectacular.)

* * *

Automation Takes Over City's Payroll

With a whirring of tapes and a flashing of lights on machines, a digital computer system took over the job of directing and making out of city employees' pay checks today.

The machinery will take care of everything but giving an employee a raise—and it will even keep a record on that, City Controller Charles Navarro said.

Navarro said that while the system will cost the city $98,000 a year rent, it will save $50,000 in the next two years. Already, Navarro said, five employees will be transferred to other tasks in the office and two others who have quit will not be replaced.

Moreover, Navarro pointed out, the system will mean a great saving in storage space.

—Herald-Examiner, April 4

(The magnitude of today's record keeping and the speed with which it must be accomplished make it mandatory for the machine to take over the job. Any time we have to have greater production than the human being is able to produce the sensible thing is to adopt modern methods. It is small comfort for the human being replaced and minimizing the effect does little good. Sooner or later the total operation of this Continent must adopt the methods of science proposed by Technocracy.)

Another Branch of Civic Management Needs Help

Electronic computers are the only way to keep track of the enormous increase in the county's prison population, Sheriff Peter Pitchess told the Board of Supervisors today.

Pitchess asked for an immediate study of the types of data computing systems available to handle identification, booking records, and criminal files which now contain 1.2 billion items he called essential information.

While no immediate price estimate was put on the cost, Chief Administrative Officer L.S. Holinger said it probably would run close to $1 million.

The sheriff, purchasing agent, county auditor and chief administrative officer were directed to confer with an outside consultant and report back in 60 days on what type of system should be established. The board will then seek bids.

Pitchess said completion of new men's and women's jail facilities, plus consolidation of city and county jails, would put the inmate population around 12,000.

Further, there are over 500,000 other records processed a year. This figure will rise, he said.

—Herald-Examiner, April 5

(Each area of our society will be invaded by the machine as the job becomes too large for human capacities. No one is immune to the effects and you could be next.)

* * *

Conservation and Birth Control

Washington (AP)—Mankind is gaining 120,000 mouths to feed each day and losing 20 million acres of food-producing land each year.

Man, the great destroyer, having wiped out hundreds of animals and plant species, is well embarked on a course which threatens his own kind with extinction.

These are reflections of Raymond Bouillene, professor of botany at the University of Liege, Belgium, in a paper published by the American Association of Science.

Man, according to Bouillene, "seems reluctant to accept his place in nature." He does great things. He tunnels through mountains, diverts rivers, builds dams, throws bridges over mighty waterways, masters the air, leaps into space, releases the atoms' forces, levels forests.

But much of mankind, Bouillene says, apparently has not tumbled to the elementary fact that Homo Sapiens and all other animal species are absolutely dependent on vegetation. The green plants are the only basic producers of food. As the Belgian scientist noted, "all flesh is grass."

If land and sea plants ceased to function, all life on earth would come to an end in a matter of months.

Yet man, to gain a strictly temporary increase in food production, has for centuries been destroying irretrievably the food producing power of the land.

The earth's population 7,000 years ago was about 20 million. Now it is close to 3 billion. By A.D. 2000, it has been estimated, there will be 6 billion mouths to feed "on a planet where there is less and less useful land."

"We are in the throes," says Bouillene, "of an apparently irreversible progressive reduction of the surface of cultivable lands."

The area of such lands has decreased by an estimated 20% in the last hundred years. Of the 10 billion acres remaining, "at least 20 million disappear irretrievably each year."

Bouillene believes mankind must embark on a worldwide campaign to preserve the soil. It is indispensable. Nuclear energy "has opened up new horizons in the sphere of industry but not in the realm of food-stuffs."

"Before man tries to explore the moon," says Bouillene, "he must continue to eat on earth."

—Los Angeles Times, March 11

(Scientists are continually reminding us of our obligations to ourselves and posterity but we go merrily on our way. Private enterprise will reach for the moon before anything as radical as the Professor's proposal is tried.)

* * *

Another Major Problem

St. Louis—Almost a million lost, bewildered, defeated, hopeless youngsters will leave school before graduation this year and enter a world which has no place for them, an expert on youth problems said today.

Daniel Schreiber, director of school dropout project of the National Education Association, said of them:

"Constantly running from work half-done, from school half-completed, these dropouts are truly fugitives from failure."

Schreiber said half the dropouts will be unable to find work. Those that do, he said, will be restricted to such unskilled jobs as filling-station attendants, stock clerks and car washers.

Jobs that these youngsters can handle are rapidly disappearing, Schreiber said. He cited these figures:

During the past ten years, 50,000 elevator-operator jobs disappeared in New York City alone, 8000 during the past year.

Six men with modern machinery can lay the same amount of railway track that 100 did before.

Automated examining equipment for checking transistors permit four men to do the work that 100 did a few years ago.

"How American education solves the problem of school dropouts may well determine America's future," Schreiber said in an address to the National Association of Secondary School Principals.

The greatest single factor in school dropouts, Schreiber said, is inability to read.

—Seattle Times, Feb. 28

(A national program with a positive goal might inspire more young people to try for an education. Most of our objectives are negative, just holding still and the hand holds are becoming fewer. Presently the emphasis is on grades, not education.)

* * *

A Small Part of a Continental Hydrology

Officials of Alabama, Mississippi, Tennessee and Kentucky are planning to step up lobbying in Congress for approval of a second deep-water transportation system linking the Great Lakes and the Gulf of Mexico. The only existing system is down the Mississippi River to New Orleans.

Army engineers have approved a canal linking the Tennessee River in the northwestern Alabama and eastern Mississippi. The Tennessee meets the Ohio and Mississippi rivers, and the Tombigbee runs to Mobile, Ala. on the Gulf.

Construction of the 253-mile-long canal, costing $280,000,000 will require overcoming one difficult natural obstacle — a wooded hill rising 560 feet above sea level betwen the Tennessee and Tombigbee rivers. Engineers plan a 40-mile-long cut through this hill, possibly with the use of "clean" nuclear explosives instead of conventional dynamite. A nine-foot-dep channel, adequate for inland barges, will require nine locks and several dams. An 84-foot lift lock would complete the waterway at the Pickwick Pool (reservoir) near the Tennessee-Alabama-Mississippi state lines.

Such a waterway — a dream of French settlers 250 years ago — would enhance the industrial development of the four states concerned. All of their legislatures have approved the project.

Besides opening a second route from the Gulf to the Great Lakes, the new system would reduce river transit mileage from Kentucky and Tennessee towns to the Gulf. In some instances, the new route would be 700 miles shorter than travel over the Mississippi to New Orleans. The waterway is expected to accommodate 12,500,000 tons of cargo annually.

Lobbyists for the four states have discovered no outright opposition to the plan in Congress. But some shippers, manufacturers and port authorities may object. Henry N. Cook, press secretary to Alabama Gov. John Patterson, said, "We know there will be resistance, and we'll just have to meet it when it comes, but so far everything is looking good."

National Observer, April 1.

Comment: Should this project be authorized, and it is a good one, it will probably be as botched as the present St. Lawrence Seaway. Too large for Price System conception and too small from a Continental hydrological vision.

* * *

Social Security Is a Tax

A woman from Orange is confused. She read our editorial of March 1 on "The Social Security Swindle" then picked up a copy of "McCalls magazine, in which Secretary of Health, Education and Welfare Abraham Ribicoff answers questions about Social Security.

Mr. Ribicoff made a statement that "Social Security money is put into a trust fund and can be used only for the Social Security program. Today, this trust fund totals over $22 billion."

This statement is contrary to The Registrar's statements.

It is true that the Social Securiy people keep books as if they had set aside the money received in taxes from the people. However, the money is turned over to the Treasury Department which gives the Social Security Department a federal promise to pay (government bonds).

The Treasury then spends the money to operate the government.

When it becomes necessary for the Social Security agency to pay "benefits" to persons entitled to collect, the Treasury must redeem the bonds. But, the only way the Treasury can get any money

is by collecting taxes or issuing new bonds which are sold to other folks.

So, those who are paying taxes not only will have to pay tax for government operation, but they will have to pay sufficiently to retire the bonds and interest.

We suspect if a bank or other financial institution were to take the money deposited with it and use it for operating expenses, some protective government agency would be prosecuting the officers of the company for theft. With Social Security, it is the government which is using the funds for operating expenses. And the government is not going to prosecute itself.

We repeat, that Social Security is a fraud on the people. It is a tax on the people, and those who receive payments will get them from taxes collected from other persons.

Santa Ana Register, April 13

* * *

Labor Gets the Blame

New York (API) — A big United States corporation is considering importing parts manufactured in its European plants for assembly here because of high labor costs in this country.

This possibility was raised at the annual meeting of the Otis Elevator Co. About 12,000 workers are on the company's payroll in the United States.

President Percy L. Douglas said production costs in Europe are "substantially" less than in this country and as production rises at its European factories the difference in wage rates will widen.

Long Beach Press-Telegram, April 14

* * *

Last Word In Automation

Entire staff of a $250,000 natural gas treating and extraction plant in Goliad County, near Houston, Tex., is one lonely man. And then he doesn't have too much to do, according to Cressmont Consolidated Corp., operators of the advanced facility.

The plant, called the Milby installation, is an automated lean oil and absorption and refrigeration system. It extracts about 10,000 gallons a day of No. 12 r.v.p. gasoline and LPG mix from a throughput of 10,000 cu. ft. of natural gas.

Milby's lifespan is set at about 20 years. About 60 billion cu. ft. of gas reserves have been dedicated to it.

Los Angeles Times, April 15

Water Shortage Foreseen

In terms of its once most plentiful resource, water, the United States is rapidly becoming a land of haves and havenots. The growth in the use of water has ben outstripping the growth of population and the gross national product for almost a quarter century. Consumption is more than 60,000,000,000 gallons a day compared with 4,000,000,000 gallons a day in 1900.

In addition, 210,000,000,000 gallons a day are withdrawn from lakes and streams for manufacturing and other processing purposes and returned to the water supply.

"By 1980," President John Kennedy told Congress, "our national water needs will nearly double —by the end of the century they will triple. But the quantity of water which nature supplies will remain almost constant.

New England and the Southeast would have ample water into the foreseeable future. But in other areas, notably the arid and semi-arid states of the West, consumption already is pressing hard against limited supplies.

For the water-rich regions of the East and the Pacific Northwest, solution of the water problem means greater storage capacity and more effective pollution control. For the water-thirsty regions of the West, it means, in addition, costly and possibly painful choices.

Toronto Globe and Mail, March 27

Comment: Half measures will not do. Only a Continental Hydrology such as described by Technocracy can do the job.

* * *

Labor Herald, Feb. 23—In the past fifty years, the population of the U.S. doubled, or from 91½ million to 185 million. In the same time the number of those over 65 sextupled, and are 6 times more than 50 years ago.

Fifty years ago, government annual expenses were about $700 million, or .7 billion. This year they will be $92.5 billion, or 132 times greater than fifty years ago. Total costs of governments of States and localities are not so readily obtainable for 1912.

Today, the population is 185 million; and 92.5 billion in the budget averages out to $500 for each man, woman and child, or about $2100 average per family. Costs of government of States and their subsidiaries bring the average per family up to about $2.500 per year.

A Few Statistics

Los Angeles Times, Feb. 20, James Reston's column—Last year the major railroads of the country took in more money with 780,500 employees than they did in 1950 with 1,211,000 employees. In 1947, 655,000 U.S. steel workers produced 84,900,000 tons of steel; last year about the same number, using new automatic machinery, produced nearly 100 million tons—an increase of 17%. Today, the bituminous coal miners of America are producing as much coal as they did in 1949 with about one-third of the work force. . . .

. . . The first fact about all this is that nobody knows what the facts are. The President says that new machines and new workers mean that we have to find 25,000 new jobs every week and his undersecretary of labor says the figure should be 35,000. . . .

* * *

Labor, Feb. 17—Nearly a third of all Americans are today living on less than $20 a week, the President's Council of Economic Advisers recently reported. On a yearly basis the council said, "about 30 per cent of all families and unrelated persons have less than $1,000 of money income per person.

With 1,861,300 serious offenses reported in 1960, crime continued its upward surge, 14 per cent over 1959. First year of the sixties recorded a new all time high, with 98 per cent more crime than in 1950.

Crime continued to outstrip population growth over 4 to 1. Crime clock shows 4 serious crimes per minute. Robbery had most significant increase in 1960, up over 18 per cent over 1959. Criminal activity reached peak in November after low in March.

From Crime in the U.S., issued by F.B.I. Uniform Crime Reports—10

Wall Street Journal, Jan. 25—Goodbye KP. The Army has just installed three fully automated vending machine cafeterias to feed 3,000 at Fort Monmouth.

California Farmer, Jan. 6—Capital requirements for farming in California are high. Minimum investment for an adequate family citrus orchard is about $60,000; for cattle raising, $80,000 to $100,000; for field crops $80,000.

Hamilton Spectator, Feb. 22, Washington—U.S. business failures last month rose to 1,447, up 3 per cent from January, 1961. It was the highest total for the month since 1939. The January rise is part of a long climb of business failures which has continued with little interruption since the Second World War.

Long Beach Independent, Jan. 19—Cost of running the federal government will increase by an average of $11.53 for every man, woman and child in the U.S. under President Kennedy's budget for the 1963 fiscal year.

Based on a Jan. 1 population of 185.2 million, the current $89.1 billion budget for fiscal 1962 amounts to $480.02 for each American.

An expected population increase to 188.2 million by next Jan. 1 and the projected higher 1963 budget of $92.5 billion work out to $491.55 for each person in the country.

Hamilton Spectator, Dec. 11, 1961—The U.S. has invested more than $25,000,000,000 in its atomic energy program, including development of the atomic bomb, since 1940, the Atomic Energy Commission reported today.

COVER PICTURE

Called the Big Squirt Irrigator creeps down open ditches while the pump takes water out of the ditch and distributes the water 200 feet on either side. Can irrigate 20 to 80 acres per day with no attendance except to change ditches. Courtesy Irrigation Motor & Pump Co. Longmont, Colo.

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TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or associaton either in North America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are $9.00 which are paid by the member to his local Section. Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers, and economists that became known in 1920 as the Technical Alliance — a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every State and in every province in Canada, and in addition there are members in Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHO?

Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher, or housewife — so long as you are a patriotic North American — you are welcome in Technocracy.

The TECHNOCRAT

Offering to the American public a medium by which it can learn the facts regarding the transition period in which we are moving toward a New America of technological abundance.

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We have available additional copies of "Stampeding to Disaster," at 25 copies for $1; this timeless article is a good contact piece.

June, 1962 Whole No. 202

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Ultimate automation based on atomic power will make our modern industry as primitive and outdated as the stone age man looks to us today.

Albert Einstein

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The TECHNOCRAT

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IN THIS ISSUE

- It Won't Last
- Vatican Birth Control
- Changing Sugar Industry
- How Our Economy Looks to Others
- Editorial by Wm. Winter
- Revolution in Textiles
- Man Made Fibers
- It Won't Work

NEWS MAGAZINE

Whole No. 203

25 CENTS

The TECHNOCRAT

SEPTEMBER, 1962

Editorial

It Won't Work

Skepticism is one of the attributes of the unimmaginative. By definition, a skeptic is a doubting or incredulous person who holds that all knowledge is uncertain. In many it is a pose to hide inherent laziness, or to disguise an unwillingness or inability to think.

It is not hard to imagine with what skepticism and jeers the inventor of the first wheel was greeted. What good is it? It'll never amount to much! I could carry more on my back than that thing. And so on, ad nauseam. Try and imagine a world now without wheels of all kinds.

It is almost safe to speculate that there were one or more skeptics among those Greek soldiers who climbed into the wooden horse that led to the capture of Troy. You can almost hear them say, 'It'll never work! They'll never fall for a gag like this.' But, according to legend, it did work.

Skepticism was rife in Columbus' time. He sailed his three little schooners into the west to reach the Indies, when every one knew they were in the east. Few, if any, would concede that the earth was round. He did not prove his point but did remove much of the fear and superstitution of his day. Later, Magellan had the courage to try, and did succeed. Again the skeptics were confounded.

The history of science is replete with instances where the skeptics or those with a vested interest in the 'status quo' were bested. Robert Boyle as the 'Skeptical Chemyst' had much opposition from the alchemists of his day. Louis Pasteur with his investigation of bacteria, those 'Wee Little Beasties' which caused disease, was persecuted by the whole medical fraternity as well as the whole farming community. And Antoine Lavoisier had all the so-called scientists of the day at loggerheads when he finally demonstrated by experiment, first by synthesizing and then decomposing, that the oxide of mercury was composed of oxygen and mercury and was not a single element as had been believed. His work stood and became the foundation of modern chemistry.

When the thirteen colonies of England revolted and finally formed the United States, again the skeptics were in full cry. They predicted that a nation so conceived could not govern itself, yet it worked under the then existing conditions for nearly 150 years and brought forth a great nation.

Some fifteen years ago, the first atomic bomb was exploded, heralding the end of one phase of our existence and presaging the beginning of another phase. Science and technology have now attained such stature in our lives that we must prepare for inevitable social change, for our science and technology will brook no interference.

Science and its handmaiden, technology, have made it possible — yes, mandatory — that poverty, hunger, disease, human toil, and all the ills of a scarcity system of economics be relegated to the past. We as a people cannot accept anything less than the fact of abundance.

The skeptics are with us still. It'll never work; it's against human nature; it's against God's will. Haven't you been told 'the poor you will have with you always'?

Well, all of us who see the possibilities of such a future of plenty, and are aware of the fallacies of the Price System, have a duty toward ourselves and our fellow North Americans. We must make this Continent Technocracy-conscious.

Technocracy shows the way we can live in the New America of Abundance, which is coming in spite of the skeptics.

—L. M. Proctor

September, 1962

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Whole No. 203

'It Won't Last'

Within the Old Order, the people of North America can find nothing but a frustrating life and tragic death. They can only go under fighting for a 'cause' that is doomed. The future of North Americans lies with the New Order — with science and technology, and with Technocracy.

One thing that we can learn from history is that nothing in human affairs remains the same for long. The most authoritive appraisal we can make of any specific form of man's work is, 'It Won't Last.'

Yet, man has often attempted to build something — tangible or intangible — that would endure for all time. The builders of the Egyptian pyramids attempted it in the tangible form, and they were lavish in their squandering of resources, energy, and human lives in the process. The ruins of the pyramids still remain, only because stone corrodes very slowly in a desert climate. Pyramidism has been extinct for many centuries; all that the pyramids stood for has become extinguished. Perhaps no other attempt in history has been made to produce 'eternal' physical monuments that were comparable to the Egyptian pyramids.

Human efforts to produce something eternal has taken other courses. Among these have been attempts to establish an Eternal Truth that would affect the lives of men for all time. But the Truth of one century becomes a historical myth a few centuries later. The Cosmos of the Greeks and the Romans survives only as a fable in the dusty archives of forgotten lore.

This same human aspiration has carried over into the social field. Various attempts have been made to consolidate all the people of the world, or at least a major part of the world, into one social union; then the 'program' called for establishing a social order that would endure for ages. The Greeks and Romans, in turn, attempted it by military means; and each country burned itself out in endless wars. The Chinese organized a huge area and accomplished wonders for their time. This organization was eventually challenged and partially destroyed by Genghis Khan.

In the meantime, two major fascist organizations were building up in other parts of the world, the Mohammedan fascism of the Middle East and the Catholic fascism of Europe. One seat of Catholic fascism was the Holy Roman Empire. This was the unchallenged master of Europe for centuries; and, under it, Europe sank into the Dark Ages and rotted away from internal decay. In the 12th Century, the Roman branch of Catholic fascism mustered its forces and set out to challenge the heresies of the world — Christian and Infidel alike — with the Crusades. It floundered for a few centuries and, eventually, its back was broken by the religious wars of the 16th and 17th Centuries. In the meantime, the Mongol Hordes of Genghis Khan wrecked the Kharmesian Empire of Turkestan, which was the major focus of Mohammedan fascism.

The old Chinese empire did not last. The Mongol Empire, which became one of the largest, strongest, and best organized of all time, did not last; it broke apart. The Mohammedan empire never regained major strength; it persisted in weakened and fragmented condition. The Holy Roman Empire could not be resurrected again, although repeated attempts have been made to do so.

More recently, there was that great revival of Roman Catholic fascism in Europe, fronted by one Adolph Hitler, which set out to conquer the world, more or less, and set up a Thousand Year Reich. This was to be the ultimate in social organization, strength, and durability. Hitler's program called for the destruction of the Infidel to the East, after which, here would be a moratorium on science while Catholic Europe froze and crystallized the social order into a rigid fascism — the Thousand Year Reich. But the Thousand Year Reich ended before it really began.

Another recent Plan for consolidating and operating the world as a unit was the Program of International Communism. The Communist State was supposed to be the perfect society and, under it, all mankind would flourish. Being a political philosophy, communism is subject to various interpretations and schisms. Although political communism appears to be enjoying certain successes in the world today, it is safe to say of the communist Plan, 'It won't last.'

In America, there is at present an emphasis of faith in a nondescript political form which can best be termed a bastard democracy. It is believed, especially among the liberals, that this tedious, indecisive, weak-kneed, frustrating political form shall be the ultimate in social achievement and that it will outlast all other forms. But it won't outlast anything. Already it is being challenged by a pro-fascist tyranny from the far right. That, too, is only a passing phase.

Change appears to be the order of the universe. It is not limited to the short term, nor to human affairs. It applies to all aspects of reality. It applies to the life forms on the earth, to climate, to topography, and to the shape of continents. Compared with Jurassic times, everything on the earth today is different. Plant and animal life has evolved into drastically new types. The climate is changed. And the topography of the earth shows no apparent similarity — only the gross forms of the continents and oceans would match. It is also possible that the present polar ice caps were absent in the Jurassic. At that time, more than a hundred million years ago, there was no reflective intelligence on the earth; so, it was not possible for any creature to contemplate the situation and pronounce in wisdom, 'It won't last.' Still, it did not last. The plains, the mountains, rivers, swamps, and inland seas of the Jurassic are all gone; none of the numerous species of plant and animal life of that time survive now.

Should we contemplate the probable changes of the next hundred million years, we can properly presume that similar or greater changes will occur than those betwen the Jurassic and the Recent. However, in doing so, we must bar the possibility of a major disturbance on the earth resulting from some vagary of human ingenuity, as well as the less probable event of some cosmic disaster. We may presume that the earth and the rest of the Solar System will remain much the same in general form and composition as they are today. On the earth, the oceans and continents will be shaped differently, but they will still be here. The detailed topography will be greatly altered; for example, there will be nothing that could be recognized as the Himalayan Mountains or the peninsula of Florida. Life forms will still be present; but if we could see them, we would not recognize them as to species or genus, and in many cases not even as to family. There is no assurance that any of the life forms will be intelligent in the present mammalian sense. When taking such a long-term view, it is reasonably safe to point to anything on the earth today, including the human race, and say, 'It won't last.'

It is probable that man-like animals, as distinct from ape-like animals, have been on the earth for upwards of ten million years. And there is a fair probability that some form of Man will be here for at least another million years. We can anticipate that probability in only the fuzziest kind of view. In fact, it is not possible to 'see' ahead for ten thousand years with any feeling of accuracy, although it is scarcely longer than the period of human civilization to date. The most we would attempt to visualize is the next thousand years, and then only in broad generalized terms.

Something new has come into the melange of human events which is changing both the tempo and the magnitude of activities. Until recently, the changes from century to century were mostly evolvements and modifications of that which prevailed before. Real innovations were few and far between. Now, within the last hundred years, man has broken with the past; and that which is new bears little or no relationship to that which preceded it. This breakthrough is sure to expand in the decades ahead. Progress has become the scheme of the New Order.

Political forms have changed slowly from century to century, but they haven't made notable progress. Modern governments — those administered (or recently administered) by people now living — have been as vicious, repressive, and demanding as any of ancient times. Mismanagement, corruption, abuse of people, and betrayal of sacred principles has been the usual characteristics of all forms of political government. Although political forms and institutions change, they do not progress.

We can say the same thing for economic forms and institutions, particularly as seen from the view

of internal mechanics. Our Price System may be superficially different in many details from the Price System of ancient Babylon, and it may show certain refinements; but we cannot claim any basic improvement. Money can still 'work' for its owners and accrue interest and dividends. A few families still manage to become extremely wealthy while millions of people still find themselves living in poverty.

When we turn to morality, the same pattern holds. Although moral philosophers have been preaching the Good Life for thousands of years, it is still possible to find all the old immoralities flourishing. Within our lifetime, Christian peoples of Europe have set up extermination camps for the 'processing' of millions of other human beings. The cruelest forms of torture chambers have been operating in North Africa, Latin America, southeast Asia, and many other places within recent years. Graft, repression, and exploitation flourish in all parts of the world. We have no basis for claiming that there has been an improvement in human morals; changes, yes, but no improvement.

Before we become complacent in the belief that our own social order and its political government is above dishonor, let us look at certain aspects of the present and recent record. If you feel that our side is making gains in human compassion, witness the atomic bombing of Japan, the napalm bombing of Korea, or the obliteration bombings of Europe. You may try to excuse those events on the basis of wartime intoxication; but how about our recent support of extremely cruel and repressive political regimes around the world — Jimenez, Batista, Franco, Salazar, Tshombe, Ibn Saud, Diem, Chiang, Rhee? Going farther back, how about our takeover in the philippines after the Spanish-American War?

At times, it appears that our leaders are more interested in promoting and perpetuating fascism, the ultimate in barbarism, than seeking the welfare of our own citizens or, for that matter, the citizens of any country. Our conduct of World War II in Europe was stinko (not the conduct of the fighting men in the ranks, but the conduct of the politico-military leaders at the highest levels). The upsurge of McCarthyism in the United States following the war was as viciously reactionary as any political purge in history; and McCarthyism still flourishes in spite of a vacancy in the title role. Our repressions in Latin America would make decent citizens wince with shame for their country.

If you still feel that progress has been made in human morality, take a tour through a big city slum; then, end it with a visit to a welfare hospital where destitute old folks are taken to die.

Obviously, there are changes which must be labeled as improvements; there are areas in human affairs where it is evident that progress has been made. But a close examination will reveal that none of this progress is in the institutions of the Old Order. They can all be traced to the institutions of the New Order — to science and technology.

For instance, there has been progress made in the treatment of human ills, injuries, and infirmities. The long lifespan that now is common and the virtual elimination of many diseases attest to this. In medicine, man is beginning to break with the past — in the techniques of treatment, not in the economic aspects. Each new breakthrough becomes part of the general knowledge, and medical science will never return to the superstitions of past ages. At this time, we can only speculate as to how far progress can be made in the promotion of life, health, and vitality in the human body; but, in time, the ultimate will be approached — through science. Mankind is now looking to science (not politics, not economics, not superstition) to find a curative treatment for cancer. Many diseases could soon be abolished altogether except for the interference of politics, business, and the churches. At present, medicine is sorely handicapped by a partial devotion of its practitioners to the institutions of the Old Order. The physician, when he learns of the discovery of a means for eliminating another disease, is torn between pride in the advancement of medical science and mourning over the loss of one more source of income for himself.

Slavery, as it was commonly practiced for many centuries, is all but abolished from the earth. This did not come about as an effect of a moral upsurge. None of the major churches has a tradition of anti-slavery. It did not happen as a political reform measure; none of the major political forms today — fascism, communism, or tory democracy — are basically anti-slavery or anti-toil. It did not come about as a gratuity of business enterprise. Slavery went out of fashion simply because technology provided an alternative way of doing work that made slavery too expensive to maintain. Technology is steadily eliminating hu-

man toil and vigilance from the operations of a society. If it were not for resistance from the Old Order, the elimination of man-hours could proceed at a much faster pace.

In spite of the stubborn reactionism of the far right, we can safely predict of the Old Order, 'It won't last.' Time is running out for the dynasties of philosophy, superstition and greed. The New Order of science and technology is coming into its own. Not only will everything change, but the direction of the change will also change. Under the Old Order, things changed without getting better. In the New Order, all change is in the direction of progress. When we vote another political regime into office, we know that it will not be for the better. It may be a little different, but somehow it turns out the same. When we make a scientific discovery or a technological improvement, we know that the future will never be the same as the past.

When science and technology are applied to the social order, there, too, change will be in the direction of progress. Technocracy, the application of science to the society, will be an intrinsic part of the clean break with the politics, the business economics, and the philosophical hocus-pocus of the Old Order; and it will derive nothing from them.

With Technocracy, politics and business enterprise would be abolished as social diseases. Governance of the Area, including the production and distribution of goods, will be carried out by a Functional Control. The requirements of the job will determine what has to be done, how it shall be done, and who shall do it. Education and Health Care will be highly improved. There will be less toil and more opportunity for self-expression. There will be an abundance of goods and services available to the individual. There will be longer life and greater security. There will be fewer things to worry about; anyway, if one does worry, it will be about different things than the ones he worries about today. The actions of the individual will be determined more by initiative and less by incentive.

What about the future of Technocracy? Will it last? Or will it, too, pass away?

It being an intrinsic part of the New Order of science and technology, we can predict with reasonable assurance that Technocracy will last as long as the New Order lasts. Unless civilization is destroyed in the death throes of the Old Order, it is reasonable to presume that the New Order will last at least a thousand years; and, if it lasts that long, it could well go on for ten thousand years. Certainly, if there is to be a high-energy civilization on earth for ten thousand years hence, it will be a Technocracy.

The death throes of the Old Order have become so violent and so threatening in their potential that the world's people are living in fear of the future. Many are dreaming of migration to other, more tranquil planets. But this much is known by informed people on the subject: The future of mankind is here on this planet. If we are able to get onto other planets of the Solar System, it will be merely to set up outposts; for example, an astronomical observatory on the moon, which presumably would be free of atmospheric distortions. And, as for space travel to planets beyond the Solar System, we may as well forget about it, because it won't happen — ever. On the other hand, we can be equally well assurred that no 'creatures' from outer space will ever invade the earth. The matter of distance, if nothing else, logically rules it out.

Within the Old Order, the people of North America can find nothing but a frustrating life and a tragic death. They can only go under fighting for a 'cause' that is doomed.

The future of North Americans lies with the New Order — with science and technology, and with Technocracy.

Possibly, in the million year view, these, too, will not last. But we can say this much: They will last longer than anything else in human affairs that you can name.

—Wilton Ivie

Everett Daily Herald, May 25 — In the last ten years, over a quarter of a million men have left the coal mining industry. Yet, through mechanization, the output of those who have remained has doubled.

Long Beach Press-Telegram, Americus, Ga., (AP) — A fully automated $750,000 plant for turning otherwise unusable hardwood into highly profitable charcoal briquets will be opened here by the Black Panther Co., Inc., of Sandford, N. C.

There Ought to be a Law

Dear Senator:

I notice there was a lot of fuss made when the Supreme Court outlawed prayers in the schools. The boss where I work was awfully upset by it, and to hear him talk you would think that every school should have a priest in the head office. He objects to the schools having nurses, though; he says they cost the taxpayers too much money. I think he belongs to the John Birch Society. . . . The janitor thought the Supreme Court did exactly the right thing. But there is a rumor that he was once a communist, so maybe that explains his attitude. Most of the men in the office don't care one way or the other. They are the kind that would rather play golf or go fishing on Sunday than go to church, except when their wives make them.

Now, as I understand it, our forefathers came to this country so they could have religious freedom. That means they were all religious men, even if they didn't all believe the same religion. Of course, they didn't let their religion interfere too much with killing Indians or cheating each other out of land and things like that. But they generally had enough sense to remember to pray when they needed rain or when the bugs were eating up their crops and times like that.

Well, Senator, I am in favor of people believing anything they want, and I think school is as good a place to learn that as anywhere. So I think you should pass a law (or a Constitutional Amendment if that is necessary) requiring every school kid to repeat these words every day: "I believe in freedom of belief for myself and for all others; and I don't want anybody telling me what I should believe or not believe. This is a free country and everybody is entitled to figure things out for himself." Maybe it could be put in better words, but you know what I mean. I for one think freedom is worth thinking about. I suppose there are a lot of people who don't believe kids should think, especially when they are in school, but I don't agree with them. I did a lot of thinking when I was in school and I turned out all right.

It will be interesting to notice which Senators and Congressmen really believe in freedom of belief when this law comes up for a vote.

Sincerely yours,
Beetal Brayne

Automated Market

New York, (AP) May 18 — A vending machine company says it has tested an automated grocery store, where a computer keeps tabs on purchases and posts the total at an electronic checkout stand.

Vendo Co. said such a store met enthusiastic response in a midwestern test and that the system will be placed in operation by one chain by the end of the year.

Spencer Childers, president of Vendo, which has its main plant in Kansas City, said a test superette had been set up in downtown Kansas City for exhibition among retailers. He said the equipment is being tested and assembled in the test center and when completed, in about 60 days, will set up in a store in Washington, D. C.

Shoppers receive a key plate, like a credit card, at the entering turnstyle. They insert this into vending machines to extract purchases. A computer registers the card's code and makes a notation of each purchase.

Then at the checkout turnstyle, the shopper inserts the key plate and the total of all purchases is flashed on a screen and printed on a tape.

The shopper then pays coins and bills into a change-making machine and the exit turnstyle clicks open.

PUBLIC AND PRIVATE DEBT

End of Calendar Year, 1959-61

(Billions of dollars)

TABLE 1.—NET DEBT	1959	1960	1961
Total net public and private debt	847.3	884.1	936.9
Total net public debt	298.8	301.0	313.1
Federal Government and agency 1	243.2	241.0	248.1
State and local governments 2	55.6	60.0	65.0
Total net private debt	548.5	583.1	623.8
Corporations	281.5	294.8	311.5
Individuals and unincorporated enterprises	267.0	288.3	312.3
Residential mortgages (1-4 family non-farm)	124.3	123.2	145.8
Consumer	51.3	55.8	57.1
Business and farm	91.3	98.2	109.4
Gross Debt in Billions of Dollars at End of Calendar Year, 1959-61			
Total gross public and private debt	987.0	1,029.7	1,078.3
Federal Government and agency 1	321.9	322.1	330.2
State and local governments 2	62.4	67.1	72.5
Corporations	335.6	352.1	363.3
Individuals and unincorporated enterprises	267.0	288.3	312.3

1. Includes categories of debt not subject to statutory limit.
2. Data are for fiscal year ending June 30.

NOTE: *Federal Government net debt* is the total debt of all Federal agencies, less that part owed to other Federal agencies or trust funds; *State and local government net debt* is that owed to all economic entities except State and local governments; *corporate net debt* is that owed to all entities other than affiliated corporations; and *individual and unincorporated enterprise net debt* is the summation of all forms of legal indebtedness of this group, except that among individuals and unincorporated nonfinancial firms.

Source: U. S. Department of Commerce, Office of Business Economics, based on Securities and Exchange Commission, and other financial data.

Debt in a Price System is not subject to the physical laws of the world in which we live. Thus it grows with little relation to the material world it is supposed to measure.

It has now grown to such proportions, that the mind cannot conceive of its immensity. It becomes a fantasy, depicted by a figure with a long series of zeros following. In the above table it is broken down into billions and tenths of billions, but even a billion is such an enormous figure that the ordinary person has slight conception of its meaning.

—Ed.

Vatican Radio Calls Artificial Birth Control 'Solution of Tired Minds'

By Religious News Service (7-20-61)

Vatican City (RNS) — Artificial birth control to cope with the so-called problem of over-population is "a solution of tired minds," the Vatican Radio declared in a broadcast interpreting the section of Pope John XXIII's encyclical, Mater et Magistra, dealing with this matter.

Actually, the station said, the problem is not one of over-population but of under-production as well as of human selfishness.

Birth control, it said, is also "the solution of the faithless, of those who do not believe in the inexhaustible resources of nature and the inventive and creative capacity of man, of those who do not believe in progress."

Furthermore, the station added, it is "a solution of misers, of egoists, of those who do not wish to divide their bread with others, and who prefer to invest their money in the production of instruments of ruin and of death. It is a solution of base minds, who prefer death, and toil to jam up the precious streams of life."

The Vatican station said the real solution — "not new, but as old as the world" — is to ensure that all people have a share in the production and distribution of consumer goods.

The only problem, it stressed, lay in the fact that "men have always thought too much of themselves to distribute their wealth." It said "history records that the more violent of these men have often advocated and practiced the extermination of continuous populations."

"The 2,900,000,000 men alive today," the Vatican Radio continued, "are not fed any worse than the hundreds of millions who lived 2,000 or 3,000 years ago. The heart of the problem lies, not in over-population, but in under-production.

"Untapped natural resources are immense. Scientists prove that nature is not exhausted and that there is enough available material to feed all mankind — today and in the future."

Related to the possibilities of nature, the station stressed, are "the possibilities of mankind — man's intelligence and the power of his will."

"The solution," it said, "lies in a renewed scientific and technical effort by man to deepen and extend his power over nature. The progress already made in these fields reveals unlimited horizons. The problem is not to be solved by impoverishing the earth of the greatest of its riches — the life and intelligence of man."

The Vatican Radio said this was the essence of the proposal set forth in Mater et Magistra.

"It is a solution," it said, "which respects the law of life and the order established by Almighty God. It is the answer of strong men who have faith in the riches of nature and have the energy of those who believe in progress, of those who will share their daily bread and help others toward the technical development which they need for their livelihood.

"It is a solution of those who do not shrink from sacrifice and struggle to discover new fountains of riches for the triumph of the dignity and the mission of man in this world."

(The Vatican and the Communists are in complete agreement on the subject of population control.)

Probably never in history has so obvious and significant a fact (as over population) been so widely evaded or minimized by the governments of men.

Quote from James Reston in New Republic, May 14, 1962.

Long Beach Independent, May 28, United Nations, N. Y. (AP) — A U. N. statistical report indicates the world's population has passed the three billion mark for the first time. The report said it stood at 2,995 billion in mid 1960, with the population increasing 1.8 per cent a year.

Central America was increasing at the highest annual rate during 1950-60 — 2.7 per cent. Asia excluding the Soviet Union, had 1.68 billion persons, more than half the world's population. Europe remained the most densely populated continent with about 250 persons per square mile. Australia, Canada and Iceland were at the other end of the scale with less than six persons per square mile.

The Changing Sugar Industry

The sugar industry, like many another these days, is undergoing sweeping changes — from mechanization in the fields to the development of product "blends" tailored to the needs of industrial users. Recent work by marketing researchers in USDA's Economic Research Service indicates the degree to which the industry is turning to new methods.

In the sugar fields, machines have already replaced hand labor in most U. S. mainland and offshore producing areas. For example, since 1948, Hawaiian producers, the most highly mechanized group, have reduced their labor requirements from 31 to 18 manhours to produce enough cane to yield one ton of raw sugar.

At the same time, newer and better varieties of cane, along with greater use of fertilizers and pesticides, have upped sugar yields in Hawaii from 8.35 tons per acre in 1938 to 9.03 tons in 1960.

Even Puerto Rican growers, who use far more hand labor than Stateside producers, have managed to reduce their labor requirements by about 36 per cent since 1948. But they still have some way to go. Current labor requirements for Puerto Rico are 90 man hours to produce enough cane for one ton of raw sugar.

Improved techniques for processing cane and beets have also reduced labor needs. One of the new methods is the use of the automatic centrifugal to separate the molasses from the sugar in mills and refineries.

Another is an ion-exchange process to produce specialty sugars by passing it through synthetic resins. Ways have also been found to store juice for several months before final processing at the factory. These, and other developments, have either reduced the amount of labor needed or increased the amount of sucrose obtained from beets and sugar cane.

One of the newest technological advances is the "continuous absorption process", adaptable to either cane sugar refineries or sugar beet factories. This process for purifying and de-coloring sugar solutions is used in place of the more expensive batch method of purification.

One result of such changes in technology has been to shift to bigger plants with greater capacity, while smaller and older operations are closing down.

Some 71 plants processed sugar beets in the U. S. in 1948; in 1960, the figure was down to 62. Yet in the same period, total production rose by 70 per cent. The number of mainland mills processing cane declined from 62 in 1948 to 48 in 1960 — but total production increased 30 per cent.

When it comes to marketing sugar, bulk handling is the noteworthy change.

Though the conveyor belts, scoops, and installations for bulk handling are expensive to set up, once in, they pay their own way. Industry estimates indicate that as much as 40 to 55 cents per hundredweight may be saved by bulk handling. As a result, bulk handling has largely displaced bagging, even in such areas as Puerto Rico, where labor is plentiful and wages comparatively low.

The same shift to bulk has occurred though to a lesser extent, in the distribution of refined sugar. Shipments of liquid refined sugar, for example, more than doubled between 1949 and 1960, going from 10 to 25 per cent of total deliveries to industrial and institutional users.

In the past five years, shipments of bulk granulated sugar have increased even faster, though the total volume of granulated shipments is still smaller than the liquid form. In 1960 bulk granulated shipments amounted to 21 per cent of the total sugar purchased by largescale users.

Blending is an attempt to tailor products of the sugar industry to the needs of the consumer. Blending combines sugar and some other sweetener such as corn syrup for use by canners, candy makers, bakers, and other manufacturers. These ready-mixed blends offer users greater convenience, lower operating costs, and improved sanitation.

With per capita use of sugar remaining fairly steady, the industry enjoys a comfortably regular rise in total consumption as our population increases. But it also faces an increase in competition from other sweeteners.

During the 1950's more and more customers turned to such alternate products as corn sweeteners for all or part of their requirements. Consumption of corn sweeteners, for example, rose from 12 to 14 pounds per person between 1948 and 1960, and is now a little over 12 per cent of the combined consumption of sugar and corn sweeteners.

At the same time, the use of non-caloric sweeteners, such as saccharin, increased 25 per cent.

In many ways, the marketing pattern for sugar is a reflection of the changing eating habits of Americans — more processed, pre-mixed foods, and more persons. In 1949 bakers, canners, and other industrial outlets took about 42 per cent of the total deliveries in this country. At present, they buy about two-thirds of all sugar consumed in the United States. In the same period, sales to hotels and restaurants rose 116 per cent, though purchases by retail stores increased only slightly.

From agricultural Marketing, April, 1962, Roy A. Ballinger and Robert G. Martin, Authors.

How Our Economy Looks to Others

By Gaston Coblentz

Herald Tribune News Service

Paris — An unusual stream of bearishness about the economies of the western world have emanated from reputable European financial journals.

The gloomy talk centered on Wall Street, the "sickness" of the dollar, Canada's economic emergency, and a waning of the European boom.

All of these elements were seen to be interacting upon each other and to be putting an end to the western world's giddy post-war economic upsurge.

Last week's rally on Wall Street failed to change this tune. The accent of the European comments was on the prospect of trouble ahead, rather than on hopes of swift recovery.

The continuing high rate of employment in Europe, the recent improvement in the United States balance of payments, the six-week halt to the U. S. gold outflow — these favorable factors were relegated to the background.

Here are samples of the gloomy dosage that was meted out to the European public:

The Financial Times, of London: "Wall Street can safely be relied upon for nothing in its present state."

The Economist, of London:

"The world's currency difficulties are exerting a clear deflationary influence on the world economy, and threaten to create a deflationary spiral. Canada's corrective measures will themselves sharpen America's and Britain's balance of payments problems."

Fernand Baudhuin, economic professor at Belgium's Louvain University: "Growth rates on the European continent will decline to about three per cent a year. Industrial investment plans are imprudently high for a large number of industries."

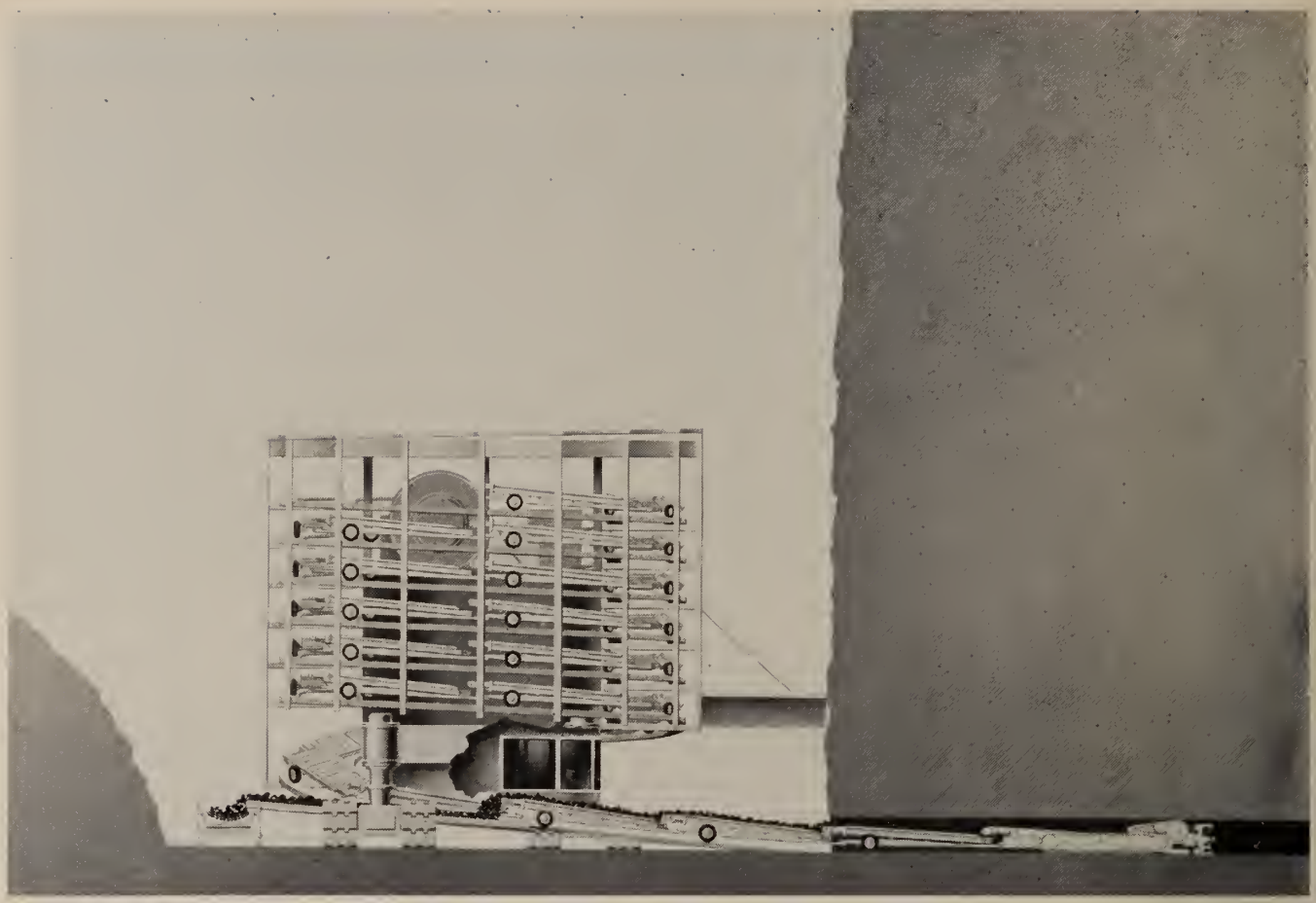
Journal Des Finances, of Paris: "It is in any case certain that the world monetary system, in the words of Jacques Rueff (a leading French economist), "risks resemblance to a house of cards."

La Vie Francaise, of Paris: "Since the sickness of the dollar became clear about 18 months ago, a large number of doctors have come to its aid. Besides short-term injections and oxygen, they have assembled formidable means of support. However, this solidarity cannot be eternal."

The Statist, of London: "We see a concatenation of circumstances which carries with it ominus echoes of the late 1920's and early 1930's: Heavy falls in security prices, slowing down of domestic economies directly affected, balance of payments defensive moves via import restrictions, falling primary commodity prices, defaults by some of the countries with the most vulnerable balance of payments positions. There is still time to arrest this vicious circle, but time is running short."

Without evaluating these judgments, it is worth nothing that their widespread publication in Europe will inevitably tend to breed additional bearishness.

—Edmonton Journal, July 9



The Push Button Miner

A Pushbutton coal digger, described as the most revolutionary coal mining development in recent years.

It can mine up to 1,100 tons of coal in eight hours, doing the work of 40 men.

A robot-like arm connected to a dial studded control room burrows as far as 800 feet underground. The robot chews out sizable chunks of coal and passes them back to a ramp.

The device eliminates sending miners into the ground and it does away with the costly process of timbering the mine.

It takes five men to operate the digger which was pioneered by Union Carbide Co. and made operational by Joy Manufacturing Co.

The boring arm is controlled by radar. When it bites into something soft the operator knows the arm has left a coal seam.

Coal officials speculate about the possibility of combining mechanical brains with mechanical miners with the whole works being controlled from one city.

This proposed system would involve programming computers in one "nerve center" to operate robot miners throughout the nation. It would do away with most of the brains and all of the brawn involved in digging coal.

RESEARCH BULLETIN

A Familiar Pattern
Railroads Start Layoff of Non-Operating Employees

Chicago (AP) June 19 — Several railroads have begun laying off non-operating employees to compensate for a 10.2 cents an hour wage boost negotiated by 11 unions representing 450,000 off-train workers.

The Illinois Central Railroad said Monday it had furloughed 650 employees. Wayne Johnson, president of the line, said it would lay off enough workers to make up the $3.8 million annual cost of the wage increases.

Several railroads said they plan to begin furloughing workers. Others said they will study the effect of the wage hike before deciding whether to make work force cutbacks.

The one year agreement which was reached June 5 followed recommendations of an emergency board appointed by President Kennedy. James E. Wolfe, spokesman for the nation's railroads estimated the settlement would cost the lines $105 million a year.

The Rock Island Line reported it has laid off 300 workers since May to offset an estimated $2.4 million payroll raise. President H. Ellis Johnson said he expected total layoffs to reach 400 within a month.

A third Chicago based railroad, the Milwaukee Road, also has begun layoffs. A company spokesman said the line expects to drop 300 or more to make up an estimated $2.5 million in additional wages.

Northern Pacific reports 54 non-operating employees have been furloughed and further cuts are expected.

The Chicago and North Western said no layoffs have been started yet, but a plan is under discussion. A company official said the wage settlement will cost the firm $2 million or more annually.

The Burlington Road reported the layoff problem is being discussed and the Erie-Lackawanna Railroad said studies were being planned.

A Santa Fe spokesman said, "Higher costs of labor and a slump in carloadings may cause some work force adjustments."

In St. Louis, Missouri Pacific announced it has begun laying off workers to offset a $3.3 million addition to its payroll. The St. Louis-San Francisco Railway announced it also is laying off non-operating employees.

(It is inherent in the operation of any Price System business where profits and not service is the motivation, costs must be cut if profits are to be maintained. The most obvious place to cut costs is on labor even when there is no penalizing apparent.)

War Years Population Explosion
Now Becomes Labor Force Problem

New York (AP) Workers with job security on their minds will have more than automation to fret about this summer and even more in the summers just ahead.

It's population explosion — not the current and possibly continuing one but that of 15 or 20 years ago.

The number of teen-agers looking for summer work will increase this June and succeeding Junes. Even larger will be the throng of those putting school and college days behind them and seeking permanent jobs.

This war and postwar explosion first triggered a rush to provide more schoolrooms. In this decade the pressure will be to find jobs for the youthful and often unskilled.

Union leaders blame the current unemployment problem as much on mechanization as on a growing labor force. To combat it they are turning more and more to a drive for a 35-hour work week at the same pay. They contend this would require more workers to turn out the goods now produced under the 40-hour week.

The administration deplores this drive as in-

flationary. The administration holds that the real solution is more production than at present and more consumption to justify that production.

This may furnish the battleground in the next few months in any government attempt to get labor to follow its guidelines on wage increases.

But a greater struggle is in the offing. That is the need to find jobs for the oncoming generation. The lower age brackets of the labor force will increase dramatically during the 1960's.

The U. S. population is growing at a rate of around three million a year. In the 1950's this wasn't much of a problem in the labor market since most of the growth was among those under 15 or over 65.

But in this decade the big increase will be in the 15 to 30 age group.

The U. S. Bureau of Census says that by 1970 there will be 49 per cent more persons in the 18 to 21 age group than in 1960. In this decade the 14 through 17 group will increase by 40 per cent. and the 20 through 29 group, which dropped 8 per cent during the 1950s due to the small baby crop during the depression, will have jumped by nearly 40 per cent.

This youthful flood of potential job seekers will mean that the total labor force will rise 18 per cent in this decade compared with 13 per cent during the 1950s.

Union leaders see this challenge as another reason the work week will have to be shortened.

—Bellingham, Wash. Herald, June 4

(Every attempt at solving this problem, as well as many other grave problems confronting this nation, runs into a blind alley when considered within the framework of the Price System.)

Automation Invades Concrete Block Manufacture

Edmonton Journal, June 20 — Automation makes it possible for the National Concrete Block Co. Ltd., to turn out 30 per cent more block per shift with only five men than other plants using standard machinery can produce with a crew of 50 men. In an eight-hour shift it can produce 11,520 blocks.

Here's how this electronically controlled plant works:

All aggregates (sand and gravel) are unloaded by gravity from tandem trucks or hopper railroad cars spotted on a spur track, which runs directly into the plant proper. A 10-yard hopper receives the aggregates and controls their disbursement along a belt conveyor which in turn feeds into an 87-foot, 100-yard-per-hour capacity bucket elevator rising to the 150-ton, four compartment bin in the tower section of the plant.

Cement is similarly conveyed through a separate elevator to a 200-barrel silo, constructed immediately adjacent to the aggregate bins. The cement silo is equipped with an aerating system and Bindicators for constant control of cement stock.

All this equipment was designed and produced by Columbia Machine Co. Inc., of Vancouver, Wash. and serves a two cubic yard weigh-batcher arranged for four aggregates and cement, controlled by four aggregate and one cement weigh beam scales.

The batcher feeds a 54 cubic foot Columbia batch mixer, where aggregates and cement are thoroughly mixed, water and ad-mixtures are added automatically and volume controlled electronically. Only softened, warm water is used in the mix.

All blocks are produced on a Columbia fully automatic machine which makes all standard sizes up to 12 inches high and which has a rated capacity of 1440 blocks 8x8x16 inches, made three at a time.

As the blocks are stripped from the machine they move along a roller conveyor to a Columbia automatic rack loader and unloader. While one rack is being automatically loaded with blocks from the machine, a rack of cured block is being unloaded onto a roller conveyor which takes the cured block to the cubing station. As cured blocks move off to the left for cubing, the pallets continue through a brush cleaning, scraping and oiling process on their way back to the pallet magazine of the block machine.

All of Asia resents that it was Asians in Japan, not Westerners, who were selected to receive the force of atomic blasts.

I was serving in the Asiatic sector of the war, and we and the enemy knew that the war had already been won when America decided to drop the first atomic bomb on Asians, and the Asians are not about to forgive — and the Communists are not about to let them forget it. This, he said, is a deep seated root of many of the United States' problems in the Far East today. "And," he added, "You writers don't write about it."

(Statement made to Ross Cunningham in his column on the editorial page of the Seattle Times, April 5.)

Radioactive fallout levels in man and foods showed a continous increase in the past two years, despite the general decline in fallout since tests of nuclear weapons were ordered stopped in 1958. The Atomic Energy Commission's recent report to Congress says this apparently is a result of accumulation of longer-lived contaminating elements from both weapons testing and nuclear development. AEC biologists say levels are still within acceptable limits.

Another report on radiation, prepared by the U. S. Atomic Bomb Casualty Commission in Hiroshima, Japan, says 230,000 persons still suffer from radiation disease, ranging from burns and bleeding gums to cancer as a result of atomic bombs dropped on Hiroshima and Nagasaki more than 15 years ago. Of the total, 4,500 were still in hospitals at the beginning of this year.

—Popular Mechanics Magazine, April, 1961

(With such a factual report at hand our military and government officials still persist in testing and building more of this scourge. It is time our citizens called a halt.)

Lack of Confidence

Service Union Reporter, May — At an impressive social gathering of business men in New York, Roger Blough, board chairman of U. S. Steel, said "one of the most necessary things this country needs is confidence in the business of this country." Would, Mr. Blough, that we could.

Let us cast a quick glance at only major developments:

In February 1961, climaxing the largest anti-trust action ever tried, sentences of heavy fines and even prison terms for individuals involved were meted out to 29 major manufacturing firms of electrical equipment — including the brand-name leaders of the industry — and 44 of their officials who had pleaded guilty to criminal charges of price fixing involving more than $8 billion worth of government and commercial contracts.

Last May a father and son brokerage team, Gerard A. and Gerard F. Re, were expelled from the American Stock Exchange on charges of illegal stock manipulation. A sweeping investigation by the Securities and Exchange Commission ensued and is still in progress but an interim report released in January was sharply critical of several Exchange practices.

On Feb. 27, 1962, James Truman Bidwell, chairman of the New York Stock Exchange board of governors, was indicted by a federal grand jury on charges of evading more than $55,000 in U. S. income taxes. He has resigned his post; his trial is pending.

In New York, the nation's two top steel producers, U. S. Steel and Bethlehem, were indicted by another federal grand jury together with two other steel companies, five executives and a trade association, on charges of violating the anti-trust laws.

In only 15 months of the Robert F. Kennedy regime at the Department of Justice, there have been 34 federal indictments for price-fixing and bid rigging.

Last month two big milk distributors in the state of Washington were indicted on these counts and Wednesday in Boston three Massachusetts milk companies were similarly charged; in addition, they were accused of defrauding the government.

Also in March four ice carnival shows were indicted on the charge they had divided up the country to corner the trade. A New York venetian blind firm has just been indicted for price-fixing and allegedly paying off a union official.

Give us something to believe in, Mr. Blough, and we'll believe it: and please make it more than a quarterly report to stockholders on earnings.

(Confidence returns when the "sucker" forgets the last time he was trimmed.)

Long Beach Independent, May 10 — Customers in Southern California Edison Long Beach district will begin receiving electric service bills this month from the new automated billing center in Long Beach.

With the changeover, local customers will receive statements which have been automatically computed, printed and mailed, A. L. Code, Edison's district manager said.

"The use of this new electronic computer is just one more way Edison is constantly increasing its efficiency to keep the cost of electric service low," Code said.

(It is well to remember that as the work load gets too much for the human being it is necessary to shove him aside and let the machine do it. Also, it is well to realize the hypocrisy used to say it is for the betterment of the customer. Soon there may be no customers able to pay the low rates.)

Brain Washing

Wall Street Journal, June 5, Saigon. The U. S. Information Service will pay the equivalent of $47 for a new, nasty and catchy name for the Communist Viet Cong guerrillas in South Vietnam.

According to the Associated Press, the USIS doesn't think Viet Cong — contraction of Vietnamese Communist — is the sort of name than will inspire the Vietnamese to regard the Reds "with contempt, as arrogant bullies, as foreign and/or Chinese puppets, as common criminals, with ridicule so the enemy loses face, with hatred, as traitors, as hypocrites, as crack-pots or madmen, as children playing soldier, or as blood-thirsty murderers."

The contest is open to Vietnamese employees of the USIS, and entries must be accompanied by explanatory essays of no more than 200 words. As an indication of what's wanted, the USIS suggests "a colloquial peasant term implying disgust or ridicule."

(We could become highly indignant had this been proposed by the other side; but, by us, it's just good clean fun.)

Cost Cutting Ideas Produce Big Savings

Aerospace, May 1962 — A succession of cost-cutting ideas among personnel of one aerospace company has slashed the cost of one-inch pins for a rocket from $2.71 each to 20 cents.

The pins are used to link stages of the missile together so that they don't slip during the flight. About 18,000 of the pins are used yearly, according to a company spokesman, and the annual savings derived from the reduced cost amounts to $45,000.

Implementation of a series of employee suggestions succeeded in reducing the cost of the pins to 77 cents, then to 27 cents and finally to slightly more than 20 cents. Employees were given cash awards for their ideas.

(Somewhat like getting a bonus for committing suicide.)

Federation News, May 26 — It would appear that there is no place to hide from automation these days. Now it's entered labor education. The International Union of Electrical Workers has devised a "teaching machine" for speed learning for shop stewards. With it a steward can self-teach or can conduct a training or grievance course. It's all a sign of the times.

Farm Employment

Long Beach Press-Telegram, June 13 — The Agriculture Department reported that 7,842,000 persons worked on the nation's farms in the week ending May 26, about 1 per cent fewer than a year earlier.

The 5,490,000 farm family members included in the working force was 2 per cent smaller than a year earlier. The number of hired workers totaled 1,192,000 persons, up 2 per cent.

(Year after year the trend continues: fewer farms, fewer workers, and more produce.)

Hydraulic Harvester

Edmonton Journal, June 18 — New cranberry harvesting technique devised by Robert Schultz of Bandon, Ore., enables one man to transfer a ton of cranberries from the flooded bog to a dump truck in less than six minutes. Floating berries are drawn into pump with a bladeless impeller which gently transfers them into truck.

Toronto Globe and Mail, May 15, Washington (AP) — The House Armed Services Committee has approved a measure to permit the sale of 219,000 bales of long staple cotton from the national strategic stockpile.

The committee approved a resolution allowing the disposal of stockpile surplus materials, principally tin, valued at $160,000,000.

The cotton sale approval would give the secretary of agriculture authority to determine the price and conditions of sale through the Commodity Credit Corp.

The surplus material measure would provide for the disposal of 14 different items, ranging from 155,000,000 pounds of castor oil to 50,000 long tons of pig tin.

About one-fifth of the tin would be sold to industry or to government agencies in the near future and the remainder over several years. The tin is part of the 174,000 long tons declared surplus to strategic needs.

(The Pentagon, having overstepped itself in its hook-up with business and financial interests, is now trying to get out of the mess. Implied in the above is the realization that they will have to be very careful not to hurt the ones they helped in the first place.)

Labor Herald, May 25, Washington, D. C. — Secretary of Labor Arthur J. Goldberg, who has consistently urged American industry to automate and improve plant efficiency, recently made public an example in his own Department of Labor.

It involved the publication by the Bureau of Labor Statistics of "Employment and Earnings Statistics for the United States, 1909-60," a book containing employment, hours, earnings, and labor turnover data under a new industrial classification system established by the Bureau of the Budget.

"If it were not for the electronic computers now in the BLS," Secretary Goldberg commented, "and the application of advanced techniques for instructing these machines, the calculations, layout, and printing of the 250,000 statistics in this major project could not have been accomplished.

To convert the BLS statistics into the new system, over 5 million employer reports and about 11 million punch cards were processed by the computer. At the same time the quality of the recomputed statistics was enhanced by advanced statistical methods made possible by the computer.

BLS programmers wrote instructions for the machine which totaled about 40,000 separate steps. The computer worked on this for about 5,000 hours over the past 2 years.

A feature of the new process was a set of instructions which enabled the machine to develop the book layout. As a result, the printout of nearly 550 pages of statistics required only 8 hours of machine time and saved many weeks of typing.

The Government Printing Office then prepared plates from the printout by photo-offset — an additional labor-saving step which avoids typesetting and proofreading — and furnished 7,000 copies of the book in less than 3 weeks.

"This is the largest job of its kind ever undertaken by BLS," the Secretary said. "It would not have been possible by conventional methods. YET IS WAS ACCOMPLISHED WITHOUT INCREASING CLERICAL OR PROFESSIONAL PERSONNEL."

(As usual, when more production is wanted it becomes necessary to move the human being out of the way. It is ironic that the example of this should have occurred under the Secretary of Labor who is trying to get private industry to take up the slack in employment.)

CONFIRMATION FROM WEST GERMAN SOURCES that the charges of the East German government of the continued participation of former Nazis in government of West Germany were justified. Read again the article "Fascism Grows in West Germany" which appeared in the June issue of The Technocrat.

New York Times, July 23, Bonn, Germany, July 22 — The West German Government has quietly set up a committee of ranking officials to investigate Communist East German charges that former Nazis are still holding positions in the judiciary.

The committee was formed in the wake of the "compulsory retirement" of Chief Prosecutor Wolfgang Fraenkel, whose involvement in Nazi legal procedings was originally disclosed by the East German Government.

The committee, composed of state secretaries from the Foreign and Justice Ministries and the Ministry for All-German affairs, is expected to make its first report to the Government shortly.

The subject is expected to be an opinion on whether to accept an invitation by the East German authorities to send officials to East Berlin to check on documents that the Communists said prove the Nazi past of West German officials.

In a long campaign that West German officials have often belittled as propaganda, the Communists have charged that 1,625 former Nazis are still active in West German courts, the police, the armed forces and the foreign service.

Though officials have maintained that the Communist reports are "grossly exaggerated," the public outcry over the handling of the Fraenkel case seems to have convinced the Government that it can no longer ignore domestic and foreign criticism that it was not doing enough to rid itself of former Nazis.

Fraenkel was forced to retire after investigators confirmed East German charges that he once held a position in the Nazi prosecutor's office in Leipzig. On the insistence of the Federal President, Heinrich Luebke, the Justice Ministry started disciplinary proceedings against the former prosecutor with the aim of nullifying his pension rights.

The record shows that Fraenkel was involved in rehearings of cases that resulted in the imposition of severe penalties, including death sentences, for relatively minor offenses.

The current and ever expanding pesticide program poses the greatest threat that animal life has ever faced — worse than deforestation, worse than market hunting and illegal shooting, worse than drainage, drought and oil pollution, and possibly worse than all of these combined.

If the programs are not curbed, we shall have been witnesses within a single decade to a greater extermination of animal life than has ever occurred in all the previous years of man's history on earth.

(Quote from Dr. George J. Wallace, Professor of Zoology of Michigan State University. Editorial in Saturday Evening Post, Sept. 2, 1961.)

From I. F. Stone's Weekly, Aug. 14 — Herman Kahn at the Holifield hearings, Aug. 7th — Long war man; "In the Rand Corporation I was known as the long war man because I studied wars that lasted two to thirty days. That was long as compared with the wars which lasted 30 minutes or two hours or eight hours.

Some people are never satisfied: "It should be possible for any person to distinguish between wars which result, say, in 20 million dead Americans and wars which result in 40 million dead Americans, and to say if he has to choose . . . he prefers a war in which there would be 20 million dead Americans. Now it is practically possible for people to make that remark, you know, that they want to say, 'why should I have a war at all?' "

(It will probably shock most people to know that the whole of our modern civilization can be ended almost in the wink of an eye, but this is where our political and financial leaders will land us if we continue to be apathetic.)

Los Angeles Times, St. Petersburg, Fla. (UP) May 30 — Police Chief Wilson Purdy has ordered officers to strictly enforce an ordinance limiting lawn sprinkling to once weekly for each home.

Officials of this parched city said excessive watering of lawns last weekend had dropped water pressures to critical levels.

(Over one thousand localities all over the U. S. have some restriction on the use of water, which should make us all realize how dependent we are on this resource. We can not continue to waste or pollute the waters of this continent.)

National Observer, May 13 — A press conference with Mr. Minnow, head of radio and television; FCC.

Mr. Gitlin: I would assume that the signals that are going to be bounced off the future satellites will be determined by the FCC and by international agreement. I'd like to ask Mr. Minnow what and who will program the satellite system when it is permanently in place some years hence.

Mr. Minnow: Well, as they say on television, "That's the $64,000 question." The networks are cooperating, at the Government's request, in this first program. I would hope myself that channels will be set aside for the United Nations. I hope some day that when a great isue is debated at the U. N., that it might be seen all over the world. This would be, it seems to me, one of the greatest avenues toward peace and human understanding that would be possible. I'd hope that the USIA will have some use in it. But all these judgments are going to have to be made. I think it's time the nation started thinking what we want to do. We constantly have technology and science exploding faster than our capacity to think about what we want to do with it humanly.

(This is certainly too potent to be turned over to private enterprise. But we will hear much propaganda insisting that government should stay out of it even if we did furnish the money.)

Wall Street Journal, April 26 — Oxygen furnaces — These furnaces, which speed the steelmaking process by blowing oxygen through molten metal, now are used by five producers with a total annual oxygen-furnace capacity of 7.5 million tons. Another 5.2 million tons of capacity is under construction. Industry observers estimate that an additional 5 million to 10 million tons may be added in the next two years.

Ford Motor Co. plans to shut down 10 old open hearth furnaces at its River Rouge, Mich., plant and replace them with two large oxygen converters. Armco Steel has begun work on two oxygen furnaces, while installations at Great Lakes Steel and Pittsburgh Steel are nearing completion. U. S. Steel considers installing its first oxygen furnace at its Duquesne, Pa., works.

Steel men say oxygen furnaces can turn out steel at more than 200 tons an hour against 80 tons for open hearths.

(Greater production, fewer man-hours, less ability to buy the product of the machine.)

An editorial from Wm. Winter Comments

"Is This Space Race Really Necessary?"

The spectacular flights of the two Soviet cosmonauts last week brought a spurt of new determination in Washington to speed America's space program. Vice-President Lyndon Johnson, who is chairman of the nation's Space Council, has sounded the keynote:

"We are behind in the production of large rockets because we did not start soon enough or work fast enough, even after we did get started. . . . We not only can afford to spend billions in space, but must afford it."

The Vice-President admits "this is a large amount of money," but he assures us "it will buy a large amount of employment, national security, international prestige, and improved standards of living."

The space budget this year is $3 billion. By next year it is expected to be up to $5 billion — even though the President promises a tax cut next year.

Price Too High

This seems a high price to pay for "employment" and "international prestige." It is not easy to follow Mr. Johnson's logic when he asserts this money will also buy "improved standards of living."

It would seem that there is a cheaper and much more direct way to improve standards of living than to waste astronomical sums on orbital joy rides.

Former President Eisenhower, writing in the Saturday Evening Post, says: I frankly do not see the need for continuing this effort as such a fantastically expensive crash program. Why the hurry to get to the moon and the planets? We have already demonstrated that in everything except the power of our booster rockets we are leading the world in scientific space exploration. We should proceed in an orderly scientific way, building one accomplishment on another, rather than engaging in a mad effort to win a stunt race."

General Eisenhower makes more sense than the space addicts. This costly competition is, as he terms it, a "mad effort to win a stunt race." But should we even proceed "in an orderly scientific way" as he suggests, to carry on space exploration?

The blunt fact is that we are being pushed and bullied by the Russians: They launch out into orbit, and we copy them. They put top priority on space flights; we feel that we must, too. Why should the Soviet government make decisions for us?

Planet Earth Needs Us

Let us concentrate on our own planet. A third of the human beings on this earth go to bed hungry every night. They live in squalor, suffer loathsome disease, their children get little or no schooling. In our own country there is what Michael Harrington (in his book "The Other America") calls our invisible poverty — there are between forty and fifty million Americans who are ill-fed, ill-clothed, ill-housed, badly educated, and receive inadequate medical care. Almost every one of our cities has its slums. It is disgraceful that we, who pride ourselves on our Affluent Society, should tolerate these miserable conditions in our own country.

Soviet space achievements have been made possible at the expense of better living conditions for the Soviet people. The money wasted in space could have produced consumer goods, better homes and higher wages.

Let us recognize the fact that the Soviet Union has achieved scientific and industrial parity with us in terms of potentials. Anything they can do, we can do: and vice-versa. Their orbital exploits have nothing to do with the merits of their Communist or Socialist system. They can be accomplished under any kind of centralized government — Communist, Fascist, Military — or Democratic.

Since getting ahead in the space race does not really prove superiority, merely priority and timing — let us urge cooperation instead of competition. Our government and the Soviet government have long talked about international cooperation in space; the International Geophysical Year was a highly successful experiment. Surely we should take the lead in urging that all future space efforts be jointly conducted under international scientific cooperation.

There is military danger in this continued competition by national governments: Some day some government might equip its orbiting satellites with nuclear warheads which could be caused to descend on any spot on earth without any warning. Once that happens, no life on this earth will ever be safe again.

Some years ago President Eisenhower received a report from a study mission of distinguished scientists on the potentials offered by the oceans. As their chairman, Dr. Harrison Brown of Cal-Tech put it: "It is more important to study the ocean's bottom, than the moon's backside."

—William Winter

Onward to the Stars

How soon will spacemen get loose from this little solar system and head their rocket ships for the stars? Never, says Dr. Sebastian von Hoerner, astronomer on the staff of the Astronomisches Rechen-Institut of Heidelberg.

In the current issue of Science, the German scientist judges that space travel, even in the most distant future, will be confined "completely to our own planetary system." To give our over-awed imaginations something to go on, Dr. von Hoerner constructs a verbal scale model of the distances involved in extraplanetary space safaris. Suppose Earth to be a minute grain of sand. Then our sun will be a cherrystone three feet away. The star nearest to Earth is another cherrystone — 140 miles away! And possibly "habitable" planets in other solar systems are 610 miles off.

To make a round trip to the home of such possible cousins as may exist on the planets of other solar systems, Dr. von Hoerner estimates, we would have to travel at the speed of light — 186,000 miles per second. That is presuming a fellow wants to get back during, and not well after, a normal human lifetime.

More over, to power his rocket for such a trip, he would have to pack 15 megawatts of power into an eyecup of fuel weighing no more than five grams, that is, about the weight of ten paper clips.

Well, one consolation, depending on how you view such matters, is that we're not likely to have people dropping in on us either — at least, not from Mars.

—America, July 28

Five-Letter Dirty Word

A great many very nice people cringe at certain four-letter words — those "dirty" four-letter words, we mean. And, to be truthful about it, there is such a thing as good taste, or even refinement, in the use of words. And there is such a thing as bad taste and vulgarity. You don't have to be either a purist or a Puritan to argue that point. Of course, it's probably a matter of the right word for the right place and time. But the four-letter dirty words haven't anything on a certain five-letter dirty word. It just couldn't be any dirtier. In fact, it's just about the dirtiest word in the language. Why, there are scores of patriotic organizations and thousands of people who hate the word as much as a preacher hates the word "sin". And the big "brass" down at the Pentagon run a temperature of 105½ degrees, whenever they hear or read the word. That five-letter dirty word is PEACE.

—Hugh Robert Orr
Editor of Progressive World

New Columbia River Dam

John Day Dam, an estimated $423,000,000 multi-purpose project on the Columbia River half way back to the Idaho state line, was ready for start of construction two years ago, upon completion of the Washington shore cofferdam.

Within the cofferdam are being constructed the north shore abutment navigation lock, fish ladder, and 19 spillways bays.

With completion of the Washington-side construction and start of the second stage on the Oregon side of the river, all river traffic will be diverted through the 113-ft.-lift navigation lock — world's highest lift capacity.

Before completion of the entire project several years from now, numerous towns and port sites upstream will have to be relocated at higher altitudes along the reservoir's edge. In the midst of such relocation pains today is the typical community of Arlington, Oregon.

The new reservoir will require the relocation of 59 miles of Union Pacific right-of-way, 80 miles of Spokane, Portland and Seattle right-of-way, 32 miles of U. S. Highway 30 right-of-way along the Oregon shore, 40 miles of Washington State Highway No. 8 on the north shore, plus uncounted miles of utility lines and poles.

The 76-miles reservoir to be created by the new dam, to be known as Lake Umatilla, will extend back up the Columbia River to the McNary Dam. This will complete the 325-mile slack water pathway up the Columbia from the Pacific Ocean to above Pasco-Kennewick in Washington, and up the Snake River to the Ice Harbor dam site.

This slack-water navigation system of reservoirs, from the Pacific Ocean into the very heart of the Inland Northwest Empire as already created by the existing dams of Bonneville, The Dalles, and McNary, is having its effect upon the economy of the region.

Annual river tonnage clearing the navigation lock at Bonneville Dam and destined for upstream river ports has reached a high of 700,000 tons. Downstream tonnage exceeds 1,000,000 tons.

Gasoline, diesel oil, fuel oil, and miscellaneous petroleum products — along with cement, lumber,

and construction steel — make up the major upstream tonnage.

Aviation gas, from the Southern Oil Field pipeline heads — plus wheat — make up most of the downstream tonnage.

Ultimate power capacity is to be 2,700,000 KW.

—Construction Craftsman, July, 1962

To Promote the General Welfare of the People

San Francisco, July 9 — The California Department of Agriculture gave cling peach growers permission to destroy part of their crop after farmers voted in a last minute action to trim this year's record 732,000 ton harvest. The action cancels out prospects of lower retail prices of most canned fruit this fall.

Practically all of the cling peach crop, grown only in California, is canned. It makes up nearly 40% of the nation's canned fruit and a glut of clings would push down its retail price and that of most other canned fruit, which must stay competitive.

The California Department of Agriculture, acting on a growers' appeal, authorized growers to destroy a portion of the huge harvest. The order came after over 70% of the state's nearly 3,000 growers backed the disposal in a swift mail ballot sponsored by the department. . . .

—Wall Street Journal

In the Same Vein

Beginning June 15, an amendment to the State's cantaloup marketing order will permit the destruction of surplus cantaloups in the field and thus control the surplus without the cost of harvesting them.

Under the order, the California Cantaloup Advisory Board has been able in the past to control surpluses by holding a percentage of the crop off the open market. All areas of the state except the southern California desert areas are covered by the order.

—California Farmer, July 7

(Both of these items show the inherent weakness of our Price System method of operation. A bountiful harvest should mean low prices for the bulk of the population. Instead it means prices upheld by the government in order to protect the producer from hardship and high prices for the consumer.)

Crop Acreage Low, Smallest Since 1909

Washington (AP) July 11 — The government predicted Tuesday that farmers will harvest the smallest total acreage of crops this year since 1909. Nevertheless, production appears likely to be plentiful.

Retirement of cropland under government surplus-control measures, coupled with agriculture's ever-increasing efficiency, makes it possible to use less and less land to meet the Nation's food and fiber needs.

An Agriculture Department crop report said the harvested acreage of all crops this year is expected to be 288 million acres — down 8 million acres or 3 per cent from last year. This acreage compares with 352 million harvested as late as 1949.

Despite appearances of drought conditions in some areas in the East and Southeast, the department said development was generally ahead of the usual pattern.

The department predicted a corn crop of 3.5 billion bushels, 3 per cent down from last year's 3.6 billion, reflecting retirement of considerable land under a program offering payments for idled land. Nevertheless, the corn harvest would be 12 per cent above average, although the smallest since 1958.

(This reflects among other things the advance of technology in that better varieties of seed, better preparation of the seed bed due to better equipment, increased use of fertilizers and pesticides make it possible. Also it should be remembered that the use of tractors instead of horses make it unnecessary to use so much land for forage crops and makes it advisable to retire land from use.)

So You Own Your Own Home!

Washington, July 19 — A record 57% of the Nation's owner-occupied homes were in hock to mortgage lenders in 1960, the Census Bureau said.

The agency said $117.2 billion of mortgage debt covered 15.8 million dwellings occupied by their owners at the time of the 1960 census. The proportion of mortgaged homes was up from 44% in 1950.

The average mortgage debt per home was $7,400, up from $4,100 in 1950.

Census officials said 39% of the first mortgages on homes were backed either by the Federal Housing Administration or the Veterans Adminis-

tration, with the remaining 61% listed as "conventional" mortgages with no Government backing. In 1950, 29% of the mortgages were Federally backed, and 71% were conventional.

—Wall Street Journal

What's a Farm and Who's a Farmer

Washington — When the administration's feed-grain program was enacted last year it was explained that it was designed to help the small family farm.

But with an extension of the program now under consideration in the much-battled farm bill, critics may venture to ask what defines a small family farm. Apparently, too, there is need to define the word "farmer."

For the major handouts in this $782-million blessing to the American farmer, designed to hold grain-producing acreage out of production, actually went to the strangest assortment of small farmers that ever leaned on a pitchfork.

They included the Louisiana State Penitentiary, which received $45,414 for its cooperation — the Northern Trust Co., Chicago, Ill. which received $41,253 — and the Farmers Investment Co., Tucson, Ariz., the big winner with $94,092.

Included in the cast were two municipal airports, in Iowa and in Nebraska, a motel in Texas, the Ford Motor Co., the Reynolds Metals Co., a prison farm in Florida and the city of St. Louis.

And a name now familiar to all pops up on the gravy train, one Billie Sol Estes, the Pecos whiz kid, whose payment of $22,875 — according to Sen. John J. Williams, R-Del., who put these figures in the Congressional Record — exceeded the total received by all the 35,000 farmers in the states of Maine, New Hampshire and Rhode Island.

While the average payment — based on about $50 per acre — was slightly over $700 per farm, eight "farmers" received between $40,000 and $50,000, and 14 received between $30,000 and $40,000.

Slightly over a million farmers in 47 states received benefits under the program in withdrawing some 25 million acres from production. And about 6,000 of them received payments above $10,000 for keeping their acres idle.

One major beneficiary of the feed-grain program was Roger Jessup, former Los Angeles County supervisor and a wealthy Glendale, Calif., dairyman. His payment last year was $11,006.

Says Williams:

"This program definitely does not benefit the small farmer. A small family type farmer cannot so readily curtail his operations. His equipment and labor costs are not lessened if he puts a part of his acreage under lease to the government. His expenses are the minimum fixed liabilities and they continue even though he lets a part of his farm lie idle.

"On the other hand, the corporate-type owner and large operator can take their acreage out of production, putting some of their tractors, combines and other equipment in the barn, dismiss their employes and spend their winter in Florida on the cash benefits which they collect from the Federal Treasury.

Bill Sumner, Long Beach Independent, Aug. 10.

A New Tool for the Farm

A farmer in Marshall, Minn., Joe Nuytten, has an electronic computer helping him this year. At the urging of scientists from International Minerals and Chemical Co., Nuytten set aside part of his 220 acre farm to be worked under the computer's guidance.

After digesting such data as available, capital and labor costs, soil fertility and average climate, the machine recommended that Nuytten plant half its alloted land to corn and the rest to soybeans. It suggested using 100 lbs. of nitrogen, phosphate and potash fertilizer on the corn, and phosphate on the beans. Nuytten said he would have planted more corn and fewer beans and put fertilizer on the corn only. He and the scientists will be watching with interest to see who's the better farmer — Nuytten or the computer.

Gold Prospectors rush to take advantage of new Federal subsidy. Last year, the Government quietly added gold to its list of minerals eligible for Federal prospecting help. The Interior Department has received 52 applications and executed eight contracts under which gold hunters agreed to spend nearly $200,000 in their search. Uncle Sam will kick in an equal amount. The funds are repaid out of production royalties, if any.

(What a bonanza this would have been for the Alaska Sourdoughs.)

Economists in the United States Forecast Fall Slump

Washington — The federal government's early warning system is flashing ominous signals of a coming recession.

It is saying that a recession is likely this year and that it could come as early as the third quarter.

The warning system can send out false signals but the weight of expert opinion is that the current alert is the real thing.

Dr. Raymond J. Saulnier, chairman of President Eisenhower's Council of Economic Advisers, set up the warning system in 1957 to give the White House advance notice of business slumps and the Kennedy administration has developed it further.

The heart of the system is a group of economic barometers that traditionally turn down before over-all economic activity dips. They originally were developed by the National Bureau of Economic Research and are called leading indicators.

Economists are impressed by the number of signals that are flashing now and by the length of time that they have been lit.

The disturbing fact is that 20 of the 26 leaders are pointing down. That strongly suggests a widespread weakening of business activity.

Industrial materials prices have been slipping for five months while new orders for hard goods and for machinery have been dipping for four months.

Stock prices have dropped for three months and so has the number of businessmen who report slower deliveries from their suppliers.

These may seem like highly specialized barometers for gauging business trends but they have been tested over the years.

The spreading weakness could spell bad political trouble for President Kennedy since it now is apparent that a recession could develop before the November congressional elections.

Administration economists are putting together a set of anti-recession measures against the possibility that the president will decide to act to beef-up the economy during the summer.

The measures under consideration include proposals for boosting government spending and for pushing through a quickie tax cut.

—Edmonton Journal, June 22,
by Joseph R. Slevin

Providence, R. I. — A sonic pile driver 20 times faster than conventional drivers has been developed by an East Providence construction company. It uses sound waves to achieve the same result as a 5,000 pound steam hammer, driving a steel pipe pile with 60 strokes a minute.

In a test demonstration the sonic rig drove a pile 70 feet into the ground seven times and removed it six times while a steam hammer was driving a similar pile only 47 feet.

—Seattle Times, May 21

Long Beach Independent, May 26, (AP) — Crime is costing Americans $22 billion a year — more than education and welfare costs combined.

California Farmer, July 21 — A Santa Cruz County poultryman reports feeding 100,000 hens an hour with a feed cart that operates at 10 miles per hour.

Long Beach Independent, May 31, (UP) N. Y. — About 25,000 super markets in the United States account for 72 per cent of the nation's grocery sales.

Lynwood Press, June 28 — Of the more than 111 million persons living in Metropolitan areas in the United States, reports the National Automobile Club, almost half live in the suburbs.

A Coming Revolution in Textiles

Washington Star, March 8, 1961 — Ronald H. Marks of Dallas is the creator of a textile revolution which is just beginning to crank up but, being a modest man, he prefers to talk about today rather than tomorrow.

The trouble with this is that as Mr. Marks talks, the imagination begins to take hold of the tomorrow-potential of his Marks-ian revolution. Such as, for example:

Cotton may be grown as a paper-making crop.

Within three to five years shirts, dresses and other items of wearing apparel, paper-made, but reusable after 25 or 30 dry cleanings or launderings, will be on the market.

The new paper yarn will stand heat up to 350 degrees, which is more than the synthetics will endure, and almost as much as fiber glass. This means it will replace the latter in a major part of plastic-core manufacturing.

What Mr. Marks has done is to invent a machine for the continuous "slitting and twisting" of paper into a thread which goes directly to the knitting machines. There is nothing new about twisting paper. But, there is everything new about a continuous operation and this means that we have a revolutionary new kind of textile. Many of the Nation's largest mills already have signed contracts with Mr. Marks, and others are on the path already beaten to his door.

Mr. Marks' continuous operation of slitting a paper roll and twisting the strands results in fine strands of paper yarn — made from paper as fine as three-sixty-fourths-of-an-inch, which results in a flexible, durable fabric of yet undetermined potential. Until he came along there were four operations in twisting paper. He does it in one. He began his experiments trying to make a bag in which to cure hams. He already has demonstrated the yarn as being cheaper and stronger for use as backing and reinforcing material for carpets, plastic laminates and building boards. It also can become a competitor of jute and the coarser fabrics used in making bags.

Mr. Marks winces a bit under questioning about using his brain-child in drapes, dresses, beach hats, summer dresses, resort wear, or summer casual clothing. The finishing process isn't now entirely satisfactory, and there is a broad field of research into the many possibilities. While that is going on he wants the emphasis on the industrial uses of the paper yarn — which is where the real money will be made. It is this possibility which has the textile people demonstrating the truth of the better-mousetrap cliche. But, the paper shirts and dresses, which will look and feel like the fabrics we now know, are in our future. And so are summer dresses — which can't be touched off with a match.

Mr. Marks, submitting to a few personal inquiries, said he was one of the great depression's children. They had to work hard and come up with a few ideas to avoid starving to death.

"I went to Southern Methodist and the University of Texas," he said. "I got out in 1933. That was the year the depression hit bottom. I had started out in a pre-law course, but gave it up to scramble through what I could take between jobs, or looking for them. Then I got into the supply business and one day not long ago, while wondering about why we couldn't get a cheap, knitted bag to cure ham I hit on the idea of paper. The available bags weren't suitable, but I kept looking at the heavy twists available and thinking there must be a better way to do it. Turned out there was."

Mr. Marks said he had never been an inventor and never thought of himself as one. The best inventions, he thinks, are those which are designed to improve on an already existing process. He invented one which does the work of four. This incidentally, is another example of automation.

One of his early comments is worth going back to for amplification.

"Did you really mean it would be profitable to grow cotton for making paper?"

"Sure," he said, "it will be cheaper because the processes of turning it into paper fabric are shorter and less expensive. This will help the cotton growers of the future."

High Voltage Current Transmission Test Due

High Voltage Current Transmission Test Due

Portland Reporter, June 9 — The first large scale test in America of high-voltage direct-current transmission of power will be undertaken by Bonneville Power administration at a cost of $1,645,000.

A five-mile experimental direct-current line with terminal equipment will be built from Big Eddy substation near The Dalles toward John Day Dam.

Transmission of power over long distances by direct current has been developed in Sweden and Russia as a means of reducing the heavy losses which occur in alternating-current transmission over long distances.

Charles F. Luce, BPA administrator, said the test facilities are being so planned that about $1,000,000 of the cost of the experimental program can be recovered when this line becomes a part of the 500,000-volt alternating line for carrying energy from John Day and The Dalles dams to the coast load centers.

(The march of technology is forcing a start toward the installation of a power grid which was first designed by Technocracy engineers at least 25 years ago. In the pamphlet "Power for a Continent" the specifications for a continent-wide power grid were set forth. Now after a lag of a quarter of a century the first hesitant steps toward its realization are being taken. Up to now, the interference of finance and politics has been able to keep it under wraps.)

Man-Made Fibres 16% of World's Textiles

London — Production of man-made fibres has doubled since the years immediately following end of World War II and now constitutes 16 per cent of all the world's textile fibres.

British exports, in 1961, were almost one-quarter higher than the previous year. More than 40,000 men and women are engaged in the British man-made fibre producing factories. Importance of the industry is illustrated by the fact that Britain manufactures over 200 different products from nylon alone.

Among the synthetic fibres now produced are several new processes which are being exploited under license in foreign and Commonwealth countries.

Wide Adaptability

Not actually produced in Britain, but in the limits of the United Kingdom, a new process has been developed which provides the textile industry with a completely new range of fabrics from man-made fibres. The linen Industry Research Association, at Lambeg, Belfast, has developed a wide variety of yarns, designated A to Z yarns, which can be produced from any type of man-made fibre, with each tailor-made to provide a fabric with chosen characteristics.

A to Z yarns are adaptable to machine and hand-knitting, and sweaters produced by either method are practically indistinguishable from those made of wool. Clarity of stitch is remarkable, and the garments wash without losing the original shape. Excellent draping characteristics, built-in crease resistance, warmth and light in weight are the features of the woven fabrics. Additionally the

fabrics possess the usual synthetic advantages of drip-dry washability.

The attractiveness of the materials for items of attire is supplemented by their suitability in weaving of carpets and the warmth, lightweight and shrinkage resistance of A to Z fabrics make them ideal for manufacturers of blankets.

Expensive installations of new machinery is unnecessary. The new yarns and fabrics can be cheaply and quickly fabricated on existing equipment. Acrilon, courtelle and other synthetics have already been converted into A to Z yarns at the Lambeg research plant. So successful have been these processes that active investigation is being made into the utilization of flax and viscose fibres in the production of the new fibres.

Crease Resistant

Less than a year ago a small research team of the Linen Industry Research Association realized the existing methods of producing crease-resisting fabrics relied upon special weaving and finishing methods. A study of the mechanism employed convinced the researchers that only a change in yarn structure would achieve permanent and effective crease resistance. The new A to Z yarns have an open structure in which each individual fibre can move freely, giving desired resiliency, crease resisting characteristics, lightweight and a very high warmth to weight ratio.

The Linen Industry Research Association and major producers of synthetic fibres are cooperating closely throughout the development project. Agreements to license the production of A to Z yarns are being negotiated. These include sources in Canada and the United States.

Still confidential in all respects, the process is covered by patents so the Linen Industry Research Association retains priority in all important textile markets. Financial terms of agreements already concluded indicate the importance of the new A to Z process.

Long History

The actual history of synthetic yarns preceding the A to Z fibres dates back over 250 years. At that time Dr. Robert Hooke, a British scientist, suggested the feasibility of drawing a fibre from a glutinous mass.

No follow-up was undertaken and it was not until the end of the 19th century that a Frenchman, Comte de Chardonnet, produced artificial silk. This discovery was followed by that of Mercer's cotton processing technique, Cross' viscose and Carothers' development of nylon.

Now this latest synthetic advance, A to Z fibres, has been developed by the Linen Industry Research Association team under D. A. Derrett-Smith and H. A. C. Todd.

Wall Street Journal, April 24 — Federal Farm research outlays keep climbing — to a planned $162 million for the fiscal year starting in July from $157 million this year and $148 last year. Despite talk of more emphasis on market research, the big bulk still goes for production boosting projects: better crop varieties, improving farm methods, better control of disease, weeds and insects.

New wheat variety being distributed to seed producers yields an eye-popping 100 bushels an acre on test plots; farmers average around 24 bushels now. Corn yields soared above 60 bushels an acre last year, dwarfing the 23 bushels of thirty years ago. Cotton output averages close to 500 pounds an acre now, double the depression years. Scientists step up efforts to stamp out the ancient cotton enemy, the boll weevil; success would boost yields enormously.

(A confused department in a confused government. No clear objective, so that one move cancels the other.)

Wall Street Journal, June 12, (AP) — Premier Constantine Caramanlis is trying to get Greek farmers to grow less wheat because it's cheaper to obtain American surplus stocks under U. S. aid programs. . . . Greece obtained large stocks of U. S. surplus wheat until a year ago, when its own production started to fill domestic needs.

(It's a tough job to dispose of our abundance off this continent.)

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North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or associaton either in North America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are $9.00 which are paid by the member to his local Section. Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol sgnifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers, and economists that became known in 1920 as the Technical Alliance — a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every State and in every province in Canada, and in addition there are members in Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHO?

Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher, or housewife — so long as you are a patriotic North American — you are welcome in Technocracy.

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September, 1962 Whole No. 203

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Solution in Order

The domestic problem here at home in the United States and Canada is one of how to distribute the ever-mounting abundance pouring out of our national production. Sufficient purchasing power cannot be created nationally by the total volume of salaries and wages to ensure the volume distribution of this abundance to the respective populations of these two great producing entities of North America. Washington and Ottawa, Wall Street and James Street are plagued with this dilemma. We are rushing headlong into more and more critical stages on the national scene. A national or Continental solution to the social problems of this Continent is in order. There comes the trouble. No solution to the social problems of United States and Canada is possible short of a Fundamental redesign and reconstruction of our entire economic and political structures. Rather than face the social change implicit in such fundamental redesign, the business interests and political parties of United States and Canada in their psychotic fear of our social realism at home are conspiring to involve both countries in a world-wide crusade to stop social change and make the world safe for American business

—Howard Scott

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IN THIS ISSUE:

- Social Change
- Life at "Dull Normal"
- Agricultural Automation and its Effects
- Studies in Logic
- 77 Million Americans Have Little More Than Nothing
- The Rape of Canada's Resources
- Land of Opportunity

NEWS MAGAZINE

Whole No. 204

25 CENTS

The TECHNOCRAT

DECEMBER, 1962

Editorial

SOCIAL CHANGE

The discovery of fire is buried in antiquity. But when it was first put to use by man there was started a progression in the use of extraneous energy which has grown from zero until now physical production utilizes one part man-supplied energy and ninety-nine parts extraneous energy.

The fact of the knowledge of fire gave primitive man a greater command over his environment, enabling him to inhabit more rigorous climates, protect himself from dangerous animals, make better weapons and provide himself with water transportation. Probably no one noticed that it was this knowledge of the use of fire which changed their way of life. It was probably the first instance of social change brought on by technology.

The domestication of animals together with the cultivation of plants likewise produced a social change. Here the ability of man to tap the vast fund of extraneous energy of the sun and store it for future winter use created a most decided social change. It created a schism in the population of primitive folk. One group wanted the security of a fixed abode while another preferred the nomadic life of the hunter. As time passed this grouping became more apparent. The security minded built houses, stored food and built up a variety of communal life. The hunter, meanwhile, running out of readily available meat on the hoof, plundered the security minded. They in turn settled down and were in turn plundered. There was little change in this pattern for centuries, except that the slow increase in population made it seem that there was change.

Leaders, religious and secular, came to power. Wars were fought in the name of some potentate or religion. People lived and died believing — believing the word of some leader that they were going to be emancipated, freed of their burden of toil, if only they would fight for this or that chimera — now or in the hereafter.

Up to about the year 1800 this pattern held up quite well because the basic pattern had not changed for the bulk of the people. It is an arresting thought to realize that George Washington and Julius Caesar could have held a conference about their problems and each would have understood the other. Each one had approximately the same source of power, human beings, rated at 1/10 of a horsepower each. But for the population over which they each presided no basic change had occurred. The only difference lay in the increased use of wind and water power, domestic animals and improved tools.

From about this time, 1800, there came a new force into human life, a new method of approach, that of science. Not only America, but the rest of the civilized world began to apply science to the production of goods and services. Particularly here in America with a scant number of primitive folk, abundant resources, favorable soil, suitable climate and an economic system which encouraged rapid exploitation, the growth was exceedingly rapid. An apparently insatiable market for goods

(Continued on page 26)

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Life at 'Dull Normal'

The way of life under Freedom has been extolled so loudly and widely by American Chambers of Commerce, businessmen, and politicians that one would suppose it to be something very special and highly desirable. But what is it really like, living the American Way of Life under Freedom?

The picture is not very clear or comprehensive as it has been presented to us, and less so as it is presented to foreigners. The few facets that are revealed by Hollywood movies, Madison Avenue brochures, and Life Magazine are so sketchy or artificial that they appear strange and unrealistic even to most Americans. The sordid and tragic details of American life so flauntingly portrayed in the tabloids cannot possibly be the basic story of American life, either. There must be a common denominator for at least a large majority of Americans that for some reason, perhaps because of its very 'commonness,' is slurred over and neglected in literature and art.

Of course, there are many varieties of the American Way of Life, and there are many degrees of Freedom; so, no one description will fit all the people.

Americans are segrated into a sort of economic caste system. This segregation depends mainly on differentials of income, but there are traditional, ethnic, and colloquial factors present also. The multi-millionnaire caste cannot be treated as typically American, although much of our propaganda attempts to do just that; and it is their type of Freedom that is so prominently eulogized to the world. . . . On the other hand, the 'untouchables' at the bottom of the economic caste system, the disreputable and indigent dregs of the Price System, do not represent the American Way. In between, at different levels, reside the great majority of Americans. There is the poverty caste, living both in the city slums and the countryside, which is barely able to squeeze by and maintain a minimal semblance of respectability. In a rather broad band above this comes the blue collar caste, usually regarded as below the middle class but not openly classified as 'lower class.' This is made up of the wage workers, particularly those who work with their hands rather than at paper shuffling and public relations work in offices. The blue collar caste works in the factories, in construction, in general maintenance, and in the services. This group comprises the largest bloc of the population. Above the blue collar caste is the white collar caste. This group is made up mainly of the office workers and salesmen. Their income averages higher than that of the blue collar group, and their life is a little more ostentatious; they are generally regarded as belonging to the lower middle class. Above these come the upper middle class and the upper class, made up of executives, professionals, and various types of promoters and speculators.

Each of these castes, classes, or levels in our society has its own way of life and its own appreciation of Freedom.

We shall concern ourselves here with the way of life of the blue collar caste, since it is the largest, the most widespread, and the most 'typical' of any group. Most of our discusion will be based on a small book (*), which purports to be a 'study in depth' of the workingman's wife — her environment, her personality, her interests, her pattern of living, and her outlook on life. This study was undertaken, not for objective reasons nor from a dispassionate point of view, but, to analyze her potentialities as an exploitable market by business enterprise. Thus, the book is intended primarily as a guide to advertising agencies and salesmen. It was for this reason that the wife, rather than the husband, was 'studied'; for, it is well-known among economic circles that it is the wife who handles most of the money in America, doing the shopping and spending for the family. The study concentrated on the blue collar worker's wife, because she represents the largest group of shoppers in America; and her purchases can make or break the cor-

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Workingman's wife by Lee Rainwater, R. P. Coleman and Gerald Handel, 1959. Reprinted 1962 in paperback.

porations which produce consumer goods. 'No producer of consumer goods can expect to join the ranks of the "Billion Dollar" corporations unless it produces and sells with an eye on the working class consumer.'

Prior to World War II, the average working class income of around $25.00 per week was just enough to provide the basic needs of food, clothing, and habitation. Working class families could not afford, and did not anticipate, the 'better things' of life. They were perennially conditioned to a 'lower class' status in our society. Since the war, they have experienced the most dramatic rise in income of any group in the country; after allowing for inflation, their purchasing power is some 60 per cent more than it was before the war.

(This change in the income status of the blue collar class is creating a schizoid complex in the ranks of business enterprise. On the one hand, businessmen strongly resent paying the higher wages which this change implies. They react by turning to more automatic techniques of production and handling. Through mergers and consolidations, they develop more streamlined and efficient organizational procedures. Through moving operations to foreign countries, they evade the increasing labor costs and high taxes here. In doing these things, business enterprise is defeating its own purpose; for, as the effects of these trends accumulate, the mass purchasing power of the major consuming group must shrink and taxes must rise to meet the heavier relief loads. But businessmen are accustomed to playing the expediencies of the moment and ignoring long-term developments.)

On the other hand, businessmen are jubilant over the increased spending power of the consumers. This jubilation does not stem from altruistic concern for the welfare of the working class citizen; it merely reflects the joy they derive from more sales and higher profits.

Even so, business economists feel that the working class consumer is not spending as much as he could nor expanding his standard of living as he 'should.' The introduction of *Workingman's Wife* states it this way:

'As these families move up from one income class to the next, they could represent substantially increased markets for goods, services, and investments if only they were to take on the habits and desires of the income group into which they move. . . . But there are reasons why they don't take on these new habits automatically. Their whole previous lifetime training, in most cases, was built around a different concept of how to live. There is a major job for advertising and selling to change these concepts and educate our population to desire and work for the better standard of living their increased productive ability justifies. . . . The advertiser who wants to talk meaningfully to these people must understand the symbols and messages which will have the most meaning to them.'

The immediate problem facing advertisers is that of determining which media and which kinds of approach are most effective in 'reaching' the workingman's wife. This is not an easy task, since most business executives, professional people, and sociologists have come out of white collar backgrounds and are not familiar with the way the working class lives, thinks, and feels. Not being an articulate group, very little is published depicting the life patterns and interests of this largest group of our citizens. It is the least understood segment of our population, as it has been the most neglected group throughout the writings of history.

This deficiency in our knowledge of the working class has, presumably, been corrected with a series of surveys conducted by Social Research, Inc., and others on behalf of retail business advertising.

The workingman's wife, day in and day out, experiences a routine, unexciting life which she characterizes as 'dull normal.' The routine is much the same, day after day, with little variation. It revolves around the three major interests which consume her time and drain her energy — the house, her children, and her husband. She is devoted to her housework and usually repeats the whole routine daily — sweeping and mopping the floors, washing dishes three times a day, fussing with the furniture and frills, and washing and mending clothes.

The blue collar husband usually reports to work at 8:00 a.m., and since he generally works at some distance from where he lives, it means that his wife must be up early — often as early as 5:30 or 6:00 o'clock — to prepare his breakfast, fix his lunch, make sure that he has clean clothes for the day, and see that he gets off to work on time. (She seldom sees him at work and often has only a vague idea of what he does to earn their living.) After he leaves, the wife may have a few minutes to put a load of clothes in the washer or make some other preparation for the day ahead before getting the children up and ready for school. After that hectic chore is attended to, she settles down to washing dishes, sweeping the floor, washing or ironing

the clothes, and thinking about what she will need from the store. In the meantime, she probably listens to her favorite soap operas on the radio or TV. If the children come home for lunch, she may wait until they are gone again before going forth on her big adventure of the day, the trip to the local market.

In the afternoon, she may have a little time to herself, which she may spend watching TV or reading some entertainment type magazine, such as True Story, True Romance, or Screen Stories; or she may read some paperback fiction story of adventure or romance. She seldom reads anything of a serious nature.

When the children come home from school, her hands are full chasing after them, tending to their demands, and breaking up their fights. Soon, her husband comes home and she must serve the evening meal and clean up after it. The husband may spend the evening tending to some chore or hobby of his own, 'yakking' with one of the neighbors, or watching TV. After the children are put to bed, the wife may join her husband at watching a TV program before going to bed herself.

The next day and the day after that are much the same. The weekends are little different, except the husband and children may be home more and add to the complications of the housewife's routine. The blue collar worker and his wife rarely join a club or go out to meetings or parties. The may may have certain cronies with whom he socializes, attends sporting events, or goes hunting and fishing. The wife visits with certain women of the neighborhood or with relatives for most of her social life. Even vacations are unexciting. The husband may go fishing or see a few ball games, usually without his wife who stays home to look after the house. As often as not he will stay home and attend to some work around the place or overhaul his car. He may even take on some temporary work for the period of his vacation. When a long trip is taken somewhere, it is usually to visit some relative rather than to see the tourist attractions which lure the white collar families in large numbers.

To the children of the blue collar workers, school is a bore. They attend under compulsion, have little comprehension of what it is all about, and welcome the time they can leave school permanently. After school is over, they seldom pursue anything of an educational character. The boys immediately seek some kind of steady employment and the girls seek marriage and motherhood.

The workingman's wife considers herself religious, but she does not 'work at it' intellectually; what religion she has, she accepts on faith, and this is usually the credos of the sect she grew up with. If her husband is from a different church, she tries to adjust as simply as possible. Often one or the other 'changes over' for the sake of the children, but usually it is not that important to them. They go to church only occasionally, then usually on some special occasion. The wife relies on her faith to pull her through the day's work and tribulations, and to comfort her in time of sickness and other troubles. She relies on 'fear of God' to keep her a 'respectable wife.' Since she experiences little overt-romance with her husband, whom she probably stopped loving in any intimate emotional way soon after marriage, she finds solace in her religion, her children, and her reputation as a good wife.

The workingman's wife is not adventurous by nature. She adapts readily to a 'dull normal' routine. She does not travel for the sake of traveling; she avoids becoming involved in 'causes' or social activities; she does not go in for gourmet cooking or fussy new household decors.

However, she does welcome gadgets and techniques which promise to make her work easier and allow her more free time. It is on this point that the advertisments directed to the workingman's wife place the most emphasis and gain the best response. Such ads and commercials seems inane and disgusting to people on the higher social levels, but these are the advertising messages which are most meaningful to the blue collar housewife. (Ads that stress snob appeal leave her apathetic or hostile.)

A proportion of workingmen's wives take on a job to help meet expenses, particularly those expenses occasioned by the purchase of household equipment. The job takes her out of the house for part of the day, but usually it does not provide her with new adventure. Rather, it becomes a fourth point of drain on her time and energy, along with the house, the children, and her husband.

The economic life of the blue collar family has been meager and hazardous. Unemployment, sickness, or other disaster haunts these people as major calamities. For that reason, they attempt to avoid indebtedness and try to have some money in a savings account. In the past, about the only thing they would buy on time was the house. More recently, they have been enticed into debt in various other sectors. They have accepted time-payment

plans for their cars and larger household items. They are the principal patrons of personal loan companies. But they are also the most numerous group of savings account depositors.

It is felt among business economists that, if the working class would only aspire to a middle class pattern of life and would be as willing to go into debt to acquire it as the white collar class has become, the national economy would receive a big stimulus. Hence, a major effort, on the part of advertisers, is being directed toward persuading the working class people to upgrade their status and drift away from old fashioned fears of debt and catastrophe.

The book, *The Workingman's Wife*, is interesting for certain things it reveals and implies, although one may not be in sympathy with the aims of the motivational research behind it, and it may seem to place too much emphasis on subjective interpretations. Anyway, it is well written and is readable.

The interesting things it reveals are these: (a) A large bulk of Americans do not live up to the pattern of the American Way as it is described and pictured in propaganda releases, especially those designed for foreigners. (b) The Price System is not concerned with improving the life patterns and security of the American citizens so much as it is concerned with exploiting them as a market for commercial products and services. The only real interest business has in a higher standard of living for Americans is that it would mean more purchases of merchandise, hence more profits for business. (c) Business wants a regimented, stable pattern of life for the people in the 'mass market' so that it can have a steady, predictable volume of sales of mass-produced products.

Business advertisers do not recognize, or refuse to recognize openly, that North America is moving into social change. They talk as though the present condition will continue ad infinitum, except that it will get bigger and better as seen by the eyes of business enterprise.

The whole campaign of 'reaching' the workingman's wife is predicated on the assumption that there will be full employment and general business prosperity under the auspices of private business, forever. Such an assumption must completely disregard the modern trends in technology.

It is not only the blue collar worker who is being displaced (permanently) by technological innovation. The white collar worker is getting the same treatment. The denouement of the business enterprise system as we have known it is only a matter of time — and adjustment to the discoveries and inventions which have already occurred. We don't need new discoveries to ensure the completion of the trend. New discoveries will only accelerate the process.

Technocracy does not look upon North American citizens as inevitably fitting into an economic caste system. To Technocracy, all Americans belong to only one class — consumers of abundance.

When all North Americans achieve the status of abundance, security, and freedom from toil, the circumstances and concepts which make the lot of the workingman's wife a tedious, monotonous condition of 'dull normal' will vanish. She can get out of the rut into which circumstances and traditions of the past have put her. At last, she will be a first class citizen, fully able to face life on equal terms with all other citizens of the Continent.

What the North American woman does with her opportunity in Technocracy will depend on her ability and interests. She may not become any more adventurous than she is now, and she may not be outstanding in the society as an individual; but her pattern of life will be one that she selects for herself and not one that society forces her into. It is safe to conclude that she will not think of that pattern as 'dull normal.'

—Wilton Ivie

TAXES: Detroit joins growing list of cities withholding from workers' pay. Detroit has joined Philadelphia, St. Louis, Pittsburgh, Cincinnati and Louisville in withholding local income taxes from paychecks. Commerce Clearing House says that of 14 large cities now collecting income taxes by withholding, nine are imposing a rate of 1%. Rates in other cities range from .5% to 1 5/8%.

Generally, withholding is required by employers from all compensation earned by residents and nonresidents for work done or service rendered within the city borders.

—L. A. Times, 8-15-62

Agricultural Automation and Its Effects

Never before in the history of the world has one half-century seen so many changes in our way of life, our work, even our forms of entertainment. Not only in industry, but in agriculture as well, the years since 1910 have been spectacular with a steady stream of new inventions.

During the earlier years, farming was still a matter of man power plus horse power. Harvesting of hay and grain was a hot, tedious job, requiring plenty of hands. Plowing, harrowing, cultivating and feeding farm animals all took time and brawn.

Indoors, the women cooked substantial meals on coal- or wood-burning stoves. In some districts, electric power and plumbing had not yet arrived. Autos and tractors were still very rare.

As time went on, the combine harvester made its appearance, and tractors and other labor-saving machinery came into use. Farmers able to buy larger equipment forged ahead and bought up lands from less fortunate neighbors, who usually moved away and sought employment elsewhere, some as migrant workers, others in industry. Nowadays, many farms are owned by absentee lawyers, doctors or bankers as an investment. Some own farms by inheritance, are working regular shifts elsewhere, but work their farms during off hours.

Farm women, too, now have modern equipment in their homes and have time to devote to other interests. Many find gainful employment to occupy their spare time and earn extra income.

The advent of automation was inevitable, due to man's inherent genius for invention, always searching for ways to do work faster and better. Technology has wrought great changes in the entire economy, and has caused loss of employment for untold numbers of employees. This is a complication that will not be solved by politicians.

Not only in office and factory is automation being installed, but in agriculture as well. We shall now consider some of its applications. Here, for instance, is a new, all-purpose seeder. In one trip it builds the rows in prepared seed beds, places fertilizer at two levels under the seed, plants and packs seed, and sprays pre-emerge chemicals. It will plant corn, cotton, soy beans, grain or sorghum. It can be converted into a complete cultivator.

Here is a corn harvester that takes up to 400 bushels of corn per hour and cuts it up to a degree of fineness wanted for livestock feed. It handles 60 tons of forage per hour from wagon to silo with new type blowers.

Over here is a hay-baler which packs, ties and loads ten tons of hay per hour as you drive along.

A newly developed, electrically operated cow-wash will in 4 seconds electrically wash, brush and rinse a cow to prepare her for milking. It can clean 800 cows an hour while using only one tenth of the water that hosing or floor sprinkling systems consume.

By walking through the wash-chute, which can be installed outside between the corral and barn, each cow automatically trips switches that control water showers and contoured brushes. The cow emerges cleaner than when washed by hosing and sprinklers, and is ready for the milking routine.

A farmer in Iowa who raises hogs has recently erected a newly designed finishing house, in which 560 feeder pigs can be cared for in less than an hour each day. Floor scraping, washing and re-bedding are unnecessary. Getting rid of the manure is merely a matter of pulling a plug.

He has combined the latest confinement ideas: automated feeding, slatted floors, and lagoon disposal of manure. There is a smoothly cemented pit beneath the slatted floor, into which the hogs trample the manure. Pull the plug, water enters the pit, washing the manure toward the deep end and into a covered tile, hence to the lagoon, where it sinks into 6 feet of water and is usually used for irrigation.

Feeders situated in center of each pen are kept filled automatically from hoppers. Hoppers are filled automatically from the bulk tanks outside. When feed runs low in the hopper, a mercury weight switch starts the auger from one of the tanks which carries the feed to the hopper. Another

mercury weight switch stops the auger when the hopper is full. Water is conveyed to pens through specially designed carriers made of aluminum. Six control panels automatically control the ventilation. A new hog-scale, with lever-operated gates, makes weighing a fast job.

A California enterprise recently incorporated, is dedicated to produce high quality pork profitably, and with a minimum of hand labor. Four hundred and fifty acres are zoned for hogs. They plan to fatten and finish 2300 head per year, possibly more later. Buildings were all carefully designed and built, some for breeding and farrowing, others for fattening hogs. From birth to market-weight takes about 5½ months.

A farmer in Ontario, Canada, has rigged up a very clever arrangement for shortening his daily task of cleaning the gutters in his cow stable. Made mostly of parts from various discarded machinery and with some help from a local welder, he is able, with a stationary tractor providing the motive power, to clean his stable without fuss or heavy work. In 15 minutes the manure from his 24 cows is in the spreader, ready to be taken to the field. In all, his invention cost him just $35.

Due to the fact that food processors in California have been looking for more foods to process, and farmers for a high income crop to raise, the production of snap beans has increased considerably in the last year or so. From 100 acres planted 6 or 7 years ago, the average has risen to about 2700 acres this year, with still another 100 acres under contract for 1963.

While snap beans cannot as yet be harvested mechanically, the placing of the poles and the intricate spiderweb of twine between the poles is being done automatically. A crew then staples a heavy wire at-top of poles and a heavy cord at bottom, which provides secure place for vines to cling.

The crop has been good, averaging 10 to 14 tons of beans per acre, and the price is good as half a dozen canners and freezers provide a ready market.

Potatoes are making a comeback. The credit may be shared by a variety of processors — manufacturers of potato chips, potato sticks, potato frills, canned potatoes, and quick-frozen potatoes. Now we have the instant potato flakes and even potato crystals. In the processing, potatoes are peeled, diced and boiled, and then forced through a perforated cylinder to obtain a fine mash. This mash is passed between steam-heated drums for dehydration into crystals. In this form it is sealed in small plastic bags where it can be kept without refrigeration for a year or more. The instant potato crystals have also been dissolved with other substances to produce fish-potato, chicken-potato, beef or lamb-potato and cheese-potato products. Even instant turnip and instant pumpkin have been produced.

In one prune orchard in California, the owner used to have 15 or 20 families of about four people each, harvesting his prunes. This totals 50 to 60 workers. In 1961 the entire harvest depended on only 7 men. They used a mechanical harvester which saved him $2400 over what hand labor would have cost him.

Canvas frames are used to catch the falling fruit. The types of shakers vary, and are still being improved upon. The fruit is deflected from frame to a conveyor belt and deposited in a gondola-type tractor and hauled to the packing shed.

Not all types of fruit can be harvested mechanically, but the list is growing as the right types of shakers and catching frames are developed. Certain kinds of tomatoes have been successfully machine-picked.

It may surprise some people to learn that rice is now being grown here in the U. S. First, the climate, soil, and availability of water at the right time must be considered. Its production is now geared to so many mechanical devices that the work is relatively easy. California leads the nation with upwards of 1,300,000,000 lbs, 4,400 lbs. per acre, in 1960. It is exported to Puerto Rico, Hawaii and the Orient.

Certainly there is no lack of automatic machines or gadgets available for agriculture, and if they had the price, farmers could and would equip their home, farm, and out-buildings all with automation.

A manufacturing company that deals in automatic controls lists various uses for their products. Controls for temperature, ventilation, or unit heaters in barn; for bulk-milk cooling, for infra-red lamps for baby pigs; area temperature alarm gives outdoor frost warning to orchardists; for indoor heating, etc.

A 1962 farm journal contains a prediction of what the tractor of the future will feature. Perhaps the next generation will see it perfected. It features: (1) Flyover chassis, with powered identical front and rear wheel units, floating forward or sideways with respect to the main chassis, to fit load. (2) Power take-off outlets at several points,

with snap-on couplings for either electric or hydrostatic tubes. (3) Domed plastic, air-conditioned cab, with central controls all hand-operated. Vertical steering column and swivel seat, enabling the driver to face back when in reverse gear. Lights adjustable from within cab. (4) Full range of speeds up to at least 20 mph in both directions, from fuel cell electric power or gas turbine, plus hydrostatic transmission. Perhaps two gas turbines, one for wheel power, with second using preheated exhaust gasses from first turbine, so increasing efficiency. Second unit powers hydraulic lift (front and rear). Four wheel power steering, chassis changes compensate for loss of weight or fuel. (5) Fuel tanks in fuel cells balance weight. (6) Tools and attachments fit forward, rear, or mid-mounted, with quick snap-on attachments. Oblique steering used to drive chassis over mid-mount tools.

A bit of humor is injected at this point, when the prognosticators add that the only thing they haven't figured out is how to get into the cab.

Likewise, our economists can plan production schedules and such matters, but problems of distribution remain unsolved; bottlenecks are still with us. Scarcity and abundance are opposites and can in no wise be handled in the same manner.

While automation is the natural, logical outcome of Man's inventive genius, he must soon adopt a new type of economy also. The impact of automation upon the labor force has been such that unemployment has become a major problem. Since 1939, employment in agriculture fell from one out of every five to one out of eleven. In the September 1962 issue of the Atlantic Monthly is an article by Gerard Piel, editor of Scientific American. We quote, 'Adding up all the farmers, miners and all the construction and factory workers, we find that not much more than one third of the entire labor force is engaged in producing all the abundance that chokes the channels of distribution.' Again, 'Admittedly, 50 million of us continue to be ill fed, ill clad and ill housed but idle plants and rotting surpluses testify that we have more than enough to go round.'

We now have, he tells us, enough armaments stored and the advantage of superior striking power, so that we COULD divert large sums away from the armament program into the channels for education, control of environmental pollution, and conservation and development of natural resources.

'Progress,' he says, 'has disclosed the noblest and most generous ends to human life, and has placed into our hands the means to accomplish them here on this earth. In the command of those same means, progress has given the power of irrevocable decision to our historic capacity for cruelty and folly.'

We have the means. It is to be hoped that the majority of us are interested enough in the decision to act, to turn the tide back from the brink of chaos. Some people are assured that the end of the world has been prophesied, so that's how it has to be. Shall we, the pawns, become what H. G. Wells describes as 'a basket of rabbits, floating gently and comfortably into the sea'?

How many know that there is a continental organization whose engineers have formulated a blueprint for continuous progress? It is dedicated to peace, to achievement of a functional society that will move ahead with the times, sharing the goals and services so each citizen receives his share. Price is no longer a suitable measure of value, for it is a measure of scarcity. What our economy needs now is a measure for abundance, ENERGY.

So let us not drift helplessly on to further stagnation, but choose the highway to progress and the opportunity to function at our highest level.

Contact Technocracy and study its program. The rest is up to YOU.

—Henriette Phillips, Santaquin, Utah

Dallas — Domestic oil well drilling activity seems headed for its worst year in a decade.

In its report for the week ended Sept. 17, Hughes Tool Co., said drilling declined sharply for the second consecutive week from its highest level since January to just 1,624 rotary rigs in operation. This is 204 rigs less than were active in the year earlier period.

"Prospects are that 1962 will be the first year since 1947 to average less than 1,700 active rotary rigs," said Warren L. Baker, executive vice president of the American Association of Oilwell Drilling Contractors.

The oil well drilling industry is a large consumer of such products as steel pipe, cement, and chemicals.

Although drilling is going deeper each year, faster techniques permit each rig to drill more wells. Despite this, however, the total number of completed wells also is lagging well behind last year's slow pace.

There Ought to be a Law

Dear Senator:

I heard one of our commentators on the radio a while back getting all excited because, as he said, 'Russia is only three miles from United States territory,' and he didn't think we should allow that, or something to that effect. He was talking about the Russians having a little island in the ocean up near Alaska which happens to be only three miles from a tiny little island that we have up there called Little Diomede Island. I don't think anybody lives on it, except maybe some walruses, and it is more than twenty miles from the nearest part of Alaska. Even so, I guess we wouldn't allow the Russians to be only three miles from America. They could almost spy on us from that close.

One way of fixing that would be for us to have a hydrogen bomb test on Little Diomede Island. That would blow it out of existence, then Russia would be more than 20 miles away, which would be an improvement. I don't know whether we would need a special law to do that, but you can look into it and pass one if we do need it.

At first, I thought we might accomplish the same result by just giving our island to the Russians. It would be simpler and it wouldn't be so dangerous; but the commentators would get more excited about that than they are now. I think they would be more happy if we just blew it up.

Sincerely yours,
BEETAL BRAYNE

Canadian Farm Fewer, Better

Ottawa (CP) — Canadian farms are becoming fewer but larger and boast more improved land than ever before, the Dominion Bureau of Statistics said today in a report on last year's farm census.

The census indicates the total number of farms fell to 480,903 from 575,015 five years before and 732,832 in 1941. The drop was sharpest in the Maritimes.

While the number of farms continued to decline, the country's total farm area was little changed at 172,251,051 acres, compared with 173,923,691 in 1956.

Acreage of improved land rose 3.1% in the five-year period to 103,403,426 acres from 100,326,243. Improved land was defined as fields under crops, summer fallow, improved pastures, gardens, roads, barnyards and areas of new breaking.

Total area under crops fell slightly to 62,435,534 acres from the 1956 figure of 62,944,176. The largest drop — 21.8% — was recorded in New Brunswick.

The area under crops increased 14.4% in British Columbia and showed smaller increases in Alberta and Manitoba. Declines occurred in all other provinces.

The total acreage of unimproved farm land, comprising woodlots, natural pastures and wastelands, declined 6% to 69,147,625 acres from 73,597,448.

The trend toward larger farms is shown by the distribution of farms by size groups.

The number of farms of 559 acres or fewer fell, while farms of 560 acres or more increased in number. The sharpest increase was for farms in the 760-1,119-acre range, where the number went up to 27,642 from 24,958 in 1956.

—The Hamilton Spectator, 8-28-62

This trend has been apparent all over the Continent for the past thirty years.

STUDIES IN LOGIC

I

Mr. Khrushchev said the Russians didn't have atomic rockets on Cuba and we called him a liar. We said he didn't know how to tell the truth. So, when he said they didn't have rockets on Cuba, it was the same as proof that the Russians did have rockets there.

Then, the Russians built something on Cuba in very plain sight that looked on our photographs of the place like atomic rockets. Mr. Khrushchev then said they did have some rockets on Cuba. But he is a liar and can't tell the truth, which goes to prove that Russia didn't really have atomic rockets on Cuba. They must have only built some fake rockets to fool us. Maybe that is why the Russians were so anxious to get rid of them, before we found out the real truth.

II

Our president said the Cubans had rockets and other offensive weapons on their island, which was only 90 miles from Florida. So, big United States got hysterical about little Cuba, as though she were getting ready to invade and take over all of North and South America. We even spread barbed wire all over the beaches of Florida so they couldn't land. We claim the right to fly planes over Cuba and take pictures because Cuba is such a menace to the U.S.A.

Now, it also happens that Florida is only 90 miles from Cuba, and the United States has rocket bases on Florida and a lot of other places. We also have a great big navy, a great big air force, and an awfully mean-looking marine corps. We even have a military base on Cuban soil. The Cubans think we are a menace to them. Therefore, it must be proper for Cubans to fly planes over America and photograph our missiles and tell us to get rid of them.

That would seem to be the fair way of looking at it. But it happens we are big and Cuba is small; we have the most rockets, the most guns, the most planes — a thousand to one — and we have the most men. So, we are right and they are wrong.

—Techno Critic

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77 Million Americans Have Little More Than Nothing

If enough books continue to be published on the subject, the nation's political leaders soon will have to admit that our Horatio Alger myths are crumbling faster than ever in our history: The rich are staying rich and the poor are getting poorer.

Impoverishment and deprivation have become a way of life in the United States. It has reached the point where annual income of $6,000 is hardly enough to keep family noses above water.

The great peril of the condition is that it is so widespread in a period of technological advance when our employment force is lagging far behind the rate of population growth.

Four volumes published in recent months illustrate the wage earners' desperate position today.

Perhaps the most damning indictment is described in "Poverty and Deprivation in the U. S.," published by the Conference on Economic Progress and subtitled, "The Plight of Two-Fifths of a Nation." The volume uses federal statistics to show:

—38 million Americans live in poverty.

—Another 39 million Americans live in deprivation.

Other recent publications illustrate the situation further. Michael Harrington's, "The Other America," paints a heart-breaking picture when he emphasizes that much of the poverty is chronic.

Gabriel Kolko in, "Wealth and Power in America," comes to the conclusion that the lower 40% of wage earners have slipped backward in the race to get a fair share of personal income.

Robert J. Lampman in, "The Share of Top

Wealth-Holders in National Wealth 1922-56," reveals that while all groups have enjoyed increased wealth during the period of which he writes, the top group has received a steadily increasing portion of the income pie.

These conclusions from four directions of economic study show indisputably that more than 40% of the U. S. population lacks an adequate standard of living. More accurately, 77 million do not have the spending power to attain the standard of living offered in the market place.

POVERTY AND DEPRIVATION GO TOGETHER

Of all persons living in poverty in 1960
57% were in consumer units whose heads had 8 years or less education.
43.3% lived in the South.

Of all people living in deprivation in 1960
47.1% were in consumer units whose heads had 8 years or less education.
37.2% lived in the South.

—Conference on Economic Progress

The Kennedy Administration fails to comprehend the state of our economically-tattered citizenry. The administration has announced plans to cut income taxes top-to-bottom this year or next. The theory is that private spending will be spurred by the cut.

But a tax cut for a family with $6,000 means only that the additional few dollars available will be spent for something badly needed. Meanwhile, the heavy income earner will bank his new surplus and the aim of the tax cut — to increase consumer spending — will be defeated.

Under Kennedy's plan, more of the nation's personal income will go into savings than ever before. Money will be taken out of circulation. The ability and desire to increase the Gross National Product will be further inhibited.

As put by Bernard D. Nossiter, economist-writer for the *Washington Post*, recently:

"*A more equitable distribution would mean that more of the money freed by the tax cut would flow into consumer outlays and less would leak away into saving. This characteristic of income and spending also affects business investment.*"

President Kennedy is politically astute in taking such an approach to using the national paycheck as a tool to entrench his Administration.

Harrington discusses often the minimal political awareness of the poor. Lampman and Kolko reflect indirectly the political power concentrated in the hands of the interested rich.

In other words, the President can afford politically to cater today to the wealthy while ignoring the impoverished. Blighted wage earners, busy scrabbling for food and shelter, seldom set aside time to cope with the political aspects of their position in American society.

Lampman's book, using the indicator of stock ownership as a sign of wealth, describes the wealthiest 1% of the nation's adults as owning more than 75% of corporate stock 10 years ago. Since 1953, the wealth has become still more concentrated.

Kolko's study unearths the startling fact that the base of wealth or near-wealth has broadened at the expense of the poor.

He found that the biggest income gainers in the past 30 years have been the second and third richest "tenths" of the nation's population. The group includes professional men, lower echelon managers, and the successful small businessmen.

While the second and third highest "tenths" were increasing their share of all income from 22% to nearly 28%, the poorest three-tenths dropped from 14% in 1910 to 10% in 1929. The ratio has decreased another 1% for the poor since 1929.

U. S. Commerce Department figures support Kolko's idea that the poor are becoming poorer.

The department's measurement of income shares — published last April — shows that the share of after-tax income going to the wealthiest 5% in the nation was unchanged in the five years ending in 1960. Simultaneously, the bottom 40% slipped from 17.1 to 16.4% of the total income.

Clearly, the impoverished and deprived who need more money to spend and would spend it if they had it, are receiving less and less income for their toil. At the same time, wealthier Americans add to their savings while spending about the same as they always have.

The business community is severely affected by this low-geared cycle powered by millions of low-spending consumers. Plant investment, production, employment, etc., all are retarded.

Probably the most emphatic reminder that something is wrong with our income distribution is ultimately expressed in our employment totals. Fewer workers are needed to produce less goods for weak consumers. It is true that automation has

had a great impact on employment totals. But automation cannot be blamed for all the joblessness.

Between 1956 and 1961 the U. S. labor force participation rate dropped from 59.3% to 58%. Most likely it will fall below 57% this year. Our labor force declined for the year ended in June 1962, by 85,000. We should have had an increase of 650,000 to meet employment needs — even before considering the problem of reducing existing unemployment.

The Conference on Economic Progress, in offering its proof that two-fifths of the country's inhabitants live in poverty and deprivation took President Kennedy to task for failing to make more progress toward solving the problems of technology, automation, and economic growth.

Noting that U. S. economic growth during the past nine years has been half the needed rate, and that the current economic recovery is stalling dangerously, the report warned:

"Unless we quickly determine to do much better, and adopt programs realistically suited to this purpose, the conversion of the new technology and automation into a Frankenstein rather than a blessing will mount in the years shortly ahead."

Serving unmet human needs should be the primary goal, according to the CEP, under both private consumption and public programs. Prime needs include better education, health service, housing, social security, wage standards, and less unemployment.

"The most obvious unmet needs in the United States," asserted the CEP, "are concentrated among the more than two-fifths of a nation who still live in poverty and deprivation."

The greatest need cited in the report was the "opportunity to earn much higher incomes through the enlarged job opportunities, the general upgrading, and the more rapid advance of real wages which result from high economic growth and maximum employment and production."

Regarding high wages, the CEP deplored President Kennedy's "excessive emphasis upon wage restraint for the alleged purpose of preventing price excesses and improving our international trade position, reflects a fundamental misreading of economic realities both past and prospective." (This was a portion of the report totally ignored by the nation's daily newspapers.)

The CEP said there was a need for a "quickening sense of obligation" to meet the human requirements in the second industrial revolution now enveloping the U. S.

Is the figure of 77 million impoverished and deprived Americans an imaginative one? Not according to the records of the U. S. Department of Labor and the Census Bureau.

Federal files reveal that in 1960 there were nearly 10.0 million multiple-person families with annual income of less than $4,000. There were nearly 4 million unattached individuals with annual incomes of less than $2,000. They totaled 38 million Americans — more than one-fifth of our population.

MULTIPLE PERSON FAMILIES LIVING IN POVERTY IN 1960

10.4 million families received less than $4,000 before taxes.

7.1 million families received $2,000 to $3,999 before taxes.

2.3 million families received $1,000 to $1,999 before taxes.

1.0 million families received under $1,000.

(U. S. Dept of Commerce and other sources)

The same files expose a condition of deprivation, that is, people above poverty but short of minimum requirements for a modestly comfortable level of living. There were nearly 10.5 million families with incomes from $4,000 to just under $6,000. There were more than 2 million unattached individuals with incomes from $2,000 to just under $3,000. They totaled more than 39 million Americans — another one-fifth of the population.

Combined Poverty and Deprivation in the United States (Regionally)

Region	Multiple Person Families	Unattached Individuals
South	68%	78%
North Central	53%	65%
Northeast	50%	63%
West	44%	59%

(Based on U. S. Census Bureau statistics)

The CEP made a comparison:

"At the opposite extreme, living at or above what might be called the affluence level, there were 3.5 million families with incomes of $15,000 and over, and less than one-half million unattached individuals with incomes of $7,500 and over. They totaled about 12.5 million Americans, or about 7% of the population. A fraction of these lived in wealth."

There is not room to quote the breakdown of the depressing figures of low income rampant in the country today as outlined by the CEP, a non-profit, non-political organization engaged solely in economic research and publication.

Suffice it to say that the CEP decried the growing complacency about poverty and deprivation in the U. S. (The complacency was never better illustrated than in the flippant manner in which John Kenneth Galbraith — a witty economist appointed ambassador to India by President Kennedy — coined the notion of our "affluent society" a few years ago.)

It should be noted, however, that the CEP established a boundary of income requirements for various levels of living in the U. S. today:

- The poverty level for families is annual income under $4,000.
- The deprivation level for families is income between $4,000 and $5,999.
- The deprivation-comfort level for families is income betwen $6,000 and $7,499.
- The comfort-affluence level for families is income between $7,500 and $14,999.
- The affluent or higher level for families is income of $15,000 and above.

In short, the CEP income ladder — on which 77 million Americans cling to the bottom rung — knocks the stilts from under Galbraith's fancy affluent society.

—The International Teamster, August 1962

Electrical Blackout Stuns 3-State Area

Omaha, Neb. (UPI) — A vast power failure blackened two-thirds of Nebraska and Iowa and part of South Dakota recently. Power experts said it was touched off by a faulty switch at Fort Randall Dam in South Dakota.

The failure meant a loss of 320,000 kilowatts of power into the inter-connecting grid linking Midwestern states. The inter-connected companies and public power districts in adjoining states went "flat" trying to make up the loss, the officials said.

A related factor was the loss a half hour earlier of a 100,000 kilowatt generator at the Omaha Public Power District North Omaha plant.

Omaha, Nebraska's largest city, floundered around for more than two hours without electricity. The state capital city of Lincoln was without power for more than an hour. Des Moines, Iowa, and Sioux Falls, S. D. were affected only briefly, but the power shutoff was enough to tie up traffic and communications. Millions of persons and scores of cities and towns were affected.

There was little panic in Omaha, whose 400,000 citizens were worst afflicted. But there was plenty of confusion and wonderment. At the height of the blackout:

Bank clerks issued handwritten receipts and kept their accounts in pen and ink.

A saleswoman in a dress shop said, "I sold six dresses after the lights went out."

Eight persons were trapped in an elevator at a J. C. Penney store until the contraption could be handcranked to a floor.

An elderly lady was injured when she fell down a stalled escalator at another store.

Stores closed throughout the downtown area. Clerks had to fight to keep doors open so they could get out but new customers couldn't get in.

Telephone switchboards were so flooded with anxious and inquiring calls that it was all but impossible to telephone out of Omaha.

There was no air conditioning relief from 86-degree temperatures.

Electric typewritters wouldn't type and office workers had to find their way about with flashlights and candles.

The lights began coming on again at Omaha at 5:38 p.m. EDT, two hours and two minutes after they went off. Power at Lincoln, a city of 150,000 persons, was restored an hour earlier. Most of Nebraska's 1.5-million population had been affected.

—Long Beach Independent, 6-26-62

An occurrence such as this emphasizes our dependence on the continuing functioning of the nation's technological equipment.

RESEARCH BULLETIN

Automation: Retraining to Offset it is Begun

In the last decade, automation has not only become a household word but a fact of life for millions of Americans.

Its effect on employment has become a subject of debate at virtually all levels of society.

Leading industrialists claim the over-all effect of automation has been beneficial — that it has created more jobs than it has destroyed, and that the trend will continue.

The AFL-CIO, however, counters that the substitution of machinery for men boosted unemployment by 2 million between 1953 and 1960. And some statisticians calculate that using machines to boost workers' output will eliminate about 200,000 jobs annually.

Whatever the arguments and conclusions, it seems clear that the wheels of automation will not be reversed and the process of technological wizardry and efficiency will have an increasingly potent impact on the economy.

It was against this backdrop that President Kennedy last March signed legislation aimed at retraining up to 1 million workers for new skills. A three-year, $435-million program, it is designed to help those who lose their positions through automation and those whose skills limit them to low-paying jobs.

The new law — the Manpower and Development Training Act — Mr. Kennedy noted, is "perhaps the most significant legislation in the area of employment since the historic Employment Act of 1946."

That law established as a government policy the maintenance of full employment.

Under the retraining program, administered by the U. S. Department of Labor, California — which already had a similar plan under way — will receive $7 million.

Last week, the federal money was put to use for the first time when 108 jobless men and women reported to state schools in Glendale and San Francisco to prepare themselves for new careers.

In Glendale, 22 women undertook a six-week cable-splicing course. In San Francisco, the others began training for positions as hospital orderlies and general office clerks.

Teaching of additional skills — welding, electronics, vocational nursing — will begin shortly in Los Angeles and 17 other cities. By next July, the number of trainees is expected to climb to 10,000 and eventually to 70,000.

While attending school, the average worker will receive a weekly allowance of $43.

Although there is no guarantee that all of the trainees will find employment in their new fields, they could draw some comfort from a recent study by the Federal Reserve Bank of Boston and the Massachusetts Division of Employment Security.

Of 900 retrained workers, the study showed 93% of those who made a determined effort to find new employment were successful.

—L. A. Times, 9-2-62

No let up in trying to prove that machines make jobs. So far the efforts to combat the effects of automation are like 'spitting in the ocean.'

* * *

Automation With and Without Computers

Some highly automated plants are huge; others relatively small. Computer control will pay in some processes, won't in others, may make sense at a future date in still others. Here are a few cases from hundreds Honeywell recently helped automate, indicating the range of processes involved and degree of automation decided upon:

At the Philadelphia Electric Company, a Honeywell 290 Digital Computer-directed control system "tells" generators — automatically and continuously — the share of the utility's total electric requirements each is to produce to obtain minimum incremental cost.

A far simpler approach solves a problem for a

different industry. In Iowa, the operator sets a dial on an asphaltic paver and it automatically lays a surface so swiftly and smoothly, it pleases the contractor and motorists alike.

In New Castle, Del., Honeywell played a key role in the construction of the world's largest polypropylene plant, owned by the Avisun Corp. Working with the prime contractor, Bechtel Corp., valves and spares control; supplied service technicians; co-ordinated instrumentation.

In Kenogami, Quebec, a new kraft liner-board mill of Price Brothers & Co., Ltd., automates a complex process (part batch, part continuous) with a system blending stocks, chemicals and colors with precision at lowest cost — and enabling exact duplication of even a fractional batch a year later if desired.

Even ice cream manufacture, historically confined to relatively small plants, is being automated.

In Boston, H. P. Hood & Sons uses an analog computer for instant proportioning of ingredients for every batch of whatever flavor, automatically allowing for daily variations in butterfat and solids of the milk and cream.

Automation with new equipment has boosted mix operation capacity 70%, eliminated hard manual labor and assures uniformly high quality ice cream.

—Honeywell Advertisement, Sept. 19, 1962
in Wall Street Journal

* * *

2 U.S. Firms to Pack Tuna in So. Pacific

Pago Pago, American Samoa (UPI) — Two American canneries disclosed plans recently for expansion of tuna packing into the South Pacific, using Japanese fish.

Officials of Van Camp Seafoods Company here said a new cannery would be built in the Caroline Islands, probably at Palau.

American Samoa officials said Star-Kist Foods would begin construction of a new tuna packing plant here as soon as an acceptable site could be agreed upon.

Both operations would use Japanese boats and fishermen on a contract basis similar to those successfully employed at Pago Pago by Van Camp.

Fisheries experts estimated that production costs of canned tuna at the new plants would run between 20 and 25 per cent below fish caught and packed in California.

Van Camp's tuna exports from Pago Pago have exceeded $7 million annually for the past three out of four years with an average of 13,000 tons being packed by the 380-man plant.

Additional revenues come from the fish meal and canned wahoo mackerel that is sold locally. Last year Van Camp's exports of canned tuna to the U. S. totaled $7,176,300. This was a drop of more than $250,000 from the previous year which company executives said was due primarily to a lower tonnage of fish.

The South Pacific operations rely entirely upon the long-line fishing technique perfected by the Japanese. Between 30 and 40 Japanese boats are now working out of Pago Pago under contracts which require them to sell tuna only to Van Camp. Other fish — such as marlin, sharks, mackerel — caught at the 150-foot depths are frozen and processed aboard mother ships for the Japanese markets.

The most closely guarded secret at Van Camp is the price paid the Japanese for the tuna, most of which is the high quality albacore.

Best estimates are that yellowfin is delivered at more than $200 a ton, skipjack at slightly under $200 and albacore in excess of $300. Savings, say expert sources, run about $100 a ton over fish delivered by American boats to California canneries.

The Pago Pago cannery was bought by the American government in 1961 for $21,000 by Gov. John Elliott, who was criticized for his purchase. The $250,000 plant had been forced to close because of a fish shortage when American fishing methods failed to keep the cannery operating.

Van Camp now pays a lease of $25,000 a year, and has been given a five-year tax concession by the American government. An extension of this concession is being sought by the company.

Adequate power is now available for two plants and is supplied at wholesale rates by the government.

The 380 cannery workers now get 90 cents an hour under the new American-Samoan minimum wage law.

American fishing methods are useless in the South Pacific due to the depths at which the tuna congregate. Only the Japanese, by using 50-fathom lines trailing eight to ten miles behind their boats, have been able to fish profitably.

Van Camp has leased one boat from the Japa-

nese with its captain and a fishing master to train Samoans in the operation.

* * *

San Diego (UPI) — The manager of the American Tunaboat Association in San Diego Wednesday reported drastic cuts have been made in the price Southern California canneries are paying fishermen for tuna.

August Felando said the price of albacore dropped $60 a ton and smaller cuts were made in prices of yellowfin, bluefin and skipjack. The new price for albacore is $340 a ton.

Canneries radioed news of the price cut to hundreds of small boats now at sea for the annual albacore run along the coast.

—Long Beach Independent, 8-2-62

Patriotism is for the consumer — not big business. Buy American!

* * *

U.S. Gold Pile at Low Point in 23 Years

New York — The U. S. Treasury gold stock sustained a $90,000,000 loss in the week ended Wednesday, the Federal Reserve Bank of New York reported today.

The loss, the second in the past two months, drove the nation's supply of monetary gold to its lowest level in 23 years.

—Toronto Globe & Mail, 7-26-62

* * *

U.S. Firms Increase Investments Abroad

American businessmen are planning to step up their foreign investments in 1962 at a rate almost twice that of their increase in domestic investment.

In a report by the Department of Commerce, it was revealed that business is planning to spend $4,800,000,000 in 1962 to expand or improve plant and equipment in foreign countries. This represents an increase of 14% above the 1961 amount as compared with an increase of only 8% for domestic plant and equipment expenditures now projected for the year.

Capital outlays by manufacturing firms abroad this year are reported at $1,900,000,000 or 11% higher than last year. The transportation industry, chiefly automobiles, shows the strongest rise of about $150,000,000 of which two-thirds is in Common Market countries.

The petroleum industry is planning an outlay of $1,800,000,000 for 1962 and expects to spend about the same in 1963. Mining companies expect to increase capital expenditures by one-fifth to a 1962 total of nearly $400,000,000. Investment in trade and distribution facilities is expected to rise by one-fourth to a level of $400,000,000.

—Federation News, 9-8-62

This doesn't help the drain on the gold pile.

* * *

Foreign Aid at Home

American firms and institutions have shared in contracts worth $658,544,289 as part of the U. S. foreign assistance program during the past eight years, as reported by the Agency for International Development. American contractors include engineering and construction firms engaged in public works projects overseas, universities or colleges helping improve foreign schools, consulting firms, agricultural schools, etc. The figure of $658 million does not include AID-financed foreign purchases in U. S. of industrial or agricultural goods.

—Long Beach Independent, 10-4-62

One of the reasons there is so little opposition to our foreign aid program.

* * *

Flight of Latin Capital Abroad Called Danger to 'Alliance' Program

Washington — A House-Senate Economic subcommittee said the flight of local capital from South American countries endangers the success of the Kennedy Administration's Alliance for Progress program.

The subcommittee, headed by Sen. Sparkman (D., Ala.), voiced the conclusion in a report on a recent study of South American economic progress. The report underscored the mammoth problems these nations face in trying to raise living standards and achieve stable governments.

The report said the Alliance offered hope for arresting some of these difficulties, but that the countries themselves must do more. The subcommittee was particularly concerned about "disturbing evidence" that some wealthy Latin American investors were transferring large sums to European and American banks. The report said this transfer of funds which it estimated at as much as $15 billion in recent years, was making the Alliance's task more difficult:

"If local capital patently manifests a lack of faith of prospects for its own domestic economy,

the outlook for a substantial inflow of essential private investment from outside is thereby discouraged and its amount inevitably lessened."

The report said the U. S. could hardly be expected to pour in large amounts of loans and grants for economic improvements when financially able Latin Americans were indifferent to their countries' needs. It noted that vastly larger sums than could be obtained through the Alliance would be required to meet minimum requirements for housing alone. This money, it said, would have to come from savings within the countries themselves.

The subcommittee suggested several remedies including taxes on outside investments in the U. S. At present foreign investments are encouraged by prohibiting local taxation of their profits.

—Wall Street Journal, 8-1-62

American help for the Alliance for Progress has helped the wealthy to remove their cash to foreign sanctuaries.

* * *

State Per Capita Taxes Nearly Double in Decade

The individual state tax burden of every man, woman and child in the United States has almost doubled during the past 10 years.

The average per capita state tax amounted to $112.86 during the fiscal year ended June 30, 1952. This compares with a $65 per person burden in fiscal 1962. The 1962 increase amounted to $6.83, up 6.4% over the 1961 figure.

Total state tax collections advanced to more than double during the decade: $20.6 billion in 1962; $9.9 billion in 1952. The 1962 collection was 7.9% greater than the $19.1 billion collected in 1961.

All 50 state governments indicated increases in their total 1962 tax collections. Of these, 48 also showed increases in their state tax per capita burdens. Only Hawaii and Nebraska showed nominal decreases.

The 1962 average per capita tax burden ranges from a low of $66.22 in Nebraska to a high of $201.38 in Hawaii. Delaware's $26 increase in its per capita tax was the largest during the year, while Connecticut's burden rose $20 per person.

Only 16 states collected taxes averaging less than $100 per person in fiscal 1962. Ten years ago, only two states indicated a tax burden above this level. At that time, the lowest per capita tax was $36 in New Jersey; the highest in Louisiana and Washington, with $103 each in 1952.

The individual state leaders in total collections were again the perennial forerunners, California with $2.37 billion, and New York with 2.33 billion. Pennsylvania upped its total to 1.3 billion, and Michigan hit the billion dollar mark for the first time.

All figures refer only to state-level collections. Wide variations among the states, in large part, may be attributed to the fact that some states collect and spend more taxes at local levels. As a comparison, local revenues in 1961 exceeded state revenues by $550 million — $19.6 billion local vs. $19.1 billion state.

—Minneapolis Star, 9-17-62

It is with mixed feelings that we are privileged to watch the continuing growth of our taxes. Like debt there is no easing of this phenomena in sight.

* * *

$2,669 Taxes on Average Family of 3

Los Angeles (CNS) — The average family of three in Los Angeles County paid $2,669 taxes in the 1961-62 fiscal year, the California Taxpayers Association reported Thursday night.

The organization said total taxes in the last fiscal year in the county reached $5,528,200,000, an increase of $530.8 million — or 10.6% since the 1959-60 fiscal year.

The total tax burden in the county averaged out at $889.63 per person, compared to $827.55 two years ago.

Statewide, a total of $14,614,500,000 was collected by all taxing agencies in 1961-62, an all-time high and a 14% jump over two years ago.

The federal government, the taxpayers' association report said, received the biggest sum, $8,977,000,000.

The increase in the per-capita figures, the association said, shows that taxes are outpacing population growth.

—Long Beach Independent, 8-24-62

* * *

The Profit Squeeze

A term being heard more and more frequently throughout the business community is "profit squeeze." It is not only being heard, it is having — in some instances — some distinctly visible

manifestations. Shareholders of Republic Steel and Wheeling Steel, their dividends slashed this month, will freely bear witness.

What do the words "profit squeeze" mean? As defined by one analyst, they stand for "making less on each unit of production and sales."

A case in point is the steel industry, or at least that is the sector from which the loudest complaints have been emanating. Steel officials say their troubles spring from increasing labor costs due to fringe benefits granted last spring and the inability to raise prices because of government opposition at first, and later because of increased competition — some of it foreign.

Clouding the situation is the fact that each year since the war — with few exceptions — the total of profits by all industries and services has climbed. But part of this has been due to monetary inflation, part to growing sales volume.

In short, businessmen say earnings haven't kept pace with growth rates in general. Hence, the profit squeeze — costs advancing faster than prices, a lower margin of profit on sales.

—L. A. Times, 8-31-62

Perhaps it will gradually become apparent to business men that it is impossible to sell Abundance.

* * *

Rubber Unionist Urges Action on Automation

George Burdon, president of the 150,000-member AFL-CIO United Rubber Workers' Union, told some 600 delegates that his union lost nearly 20,000 members in the past two years whose jobs were "automated" out of existence. "And automation itself is now being replaced by cybernetics in which the robots run the automated machines," Burdon said.

—L. A. Times, 9-18-62

* * *

Hamilton Hints New Measures To Save Water

Water may have to be rationed with a heavier hand here if the city is to maintain an adequate supply for emergencies, city engineer W. A. Wheten said tonight.

A week ago several reservoirs ran dry and large areas of the city were without water.

Lawn sprinkling was banned until the reservoirs, with a total capacity of 66,000,000 gallons, filled up.

Then the city introduced a system under which on odd days of the month, owners of odd-numbered houses are permitted to water their lawns between 6 and 9 a.m. and 5 and 9 p.m., and on even days, even-numbered houses may water their lawns.

"The system is working well, but we're still using 3,000,000 gallons a day more than our intakes can handle," Mr. Wheten said.

He said that the level of the 33,000,000-gallon East Barton reservoir, the city's largest, has fallen from capacity, which is 28 feet, to 18 feet in three days.

The situation was so critical last Thursday that large areas of the city would have been vulnerable if a major fire had broken out.

—Toronto Globe & Mail, 7-19-62

* * *

Water in L.A. Basin Depleted Warne Reports

Sacramento (UPI) — William E. Warne, state water resource director, Thursday said Los Angeles' underground water basins may be in danger as a primary supply source.

He said growing demands on these basins keep them in a continual withdrawn condition "despite increased imports to the area from outside sources."

Warne said this warning was included in a report on the hydrology of Los Angeles' coastal plain. The report was the second of a three-part study begun several years ago by the State Water Department.

He said "the safe yield of most of the groundwater basins in this (Los Angeles) area has been exceeded, which means that the amount of fresh water stored in these vast underground reservoirs has steadily diminished."

—Long Beach Independent, 8-17-62

* * *

Time, Oct. 26, — Gee Men — Communists — Last week in the Nation, former FBI Agent Jack Levine reported that nearly 1,500 of the Communist Party's 8,500 U. S. members are FBI informants — almost one out of six. Since members must pay party dues, this would make the FBI the largest single financial supporter of the Communist Party, U. S. A. Concluded Levine: "The day will soon come when F.B.I. informants, who are rising rapidly to the top, will capture complete control of the party."

The Rape of Canada's Resources

When the first settlers began combing eastern Canada for good farm land in the late 1700's they found it hidden under trackless miles of trees. To get rid of this covering they simply burned it down, then got on with the plowing.

A century later, when the land rush hit the prairies, the enemy appeared to be not forest but turf — a dense, fibrous cover laid down over 20,000 years, naturally enriched by 70 million buffalo. The remedy this time wasn't fire but the plow itself. Indians might mutter darkly that farmers were "turning the wrong side up," but this was obvious nonsense, as the first bumper crops of grain would soon prove.

Today, with timber a rarity where it once flourished and farms needing more and more fertilizer to produce the same yields, we know that the pioneers were wrong in laying waste the ancient soil covering. We could be bitter about this destruction of our birthright were it not for one important point: We are destroying our remaining resources at a much faster clip.

Millions of Canadians shudder at the awful prospect of nuclear war turning Canada into dusty, sterile landscape like the moon, without realizing that we are peacefully but steadily doing much the same thing to it, all by ourselves.

Though bounded on three sides by the sea and laced with more lakes and rivers than any other nation on earth, Canada is fast running short of economically usable water. Though lumber products make up our largest industry, we so-called "hewers of wood" for the world must now go so far for trees that we're rapidly pricing ourselves out of good markets. And despite our vast acreages, we get fewer dollars for our farm produce than does even tiny Britain.

On the personal level, then, how many Canadians can remember streams where they caught fish as kids, but which now yield only tin cans and old boots? Pools where they once swam but from which their own children are banned by health authorities? Woodlands where they hunted partridges, which are now housing developments, shopping centers or airports? A sawmill or paper-mill where their fathers possibly worked, which is now abandoned for lack of raw materials? A section of rich farmland where they annually stole sweet, juicy corn but which is now a rain-riddled sandheap? Even teenagers can recall disastrous floods —on the Fraser, the Red, the Ottawa, the St. John —which seemed to come from nowhere, wreak their havoc and then vanish, to be followed months later by equally devastating droughts.

All these were caused, not by long-dead pioneers, but by thoughtless people, many of whom are still living.

Many individual efforts have been made to halt the insane rush to turn Canada into another Mesopotamia, which was once so lush it was thought to be the original Garden of Eden — till woodsman and plow turned it into a desert. In the eastern Rockies, for example, not a tree may be felled if its disappearance will hasten the run-off of melting snows. Ontario in the past 15 years, has established some 30 "authorities" to try to control floods and promote good land usage. In Nova Scotia, the Small Trees act was passed to prevent anyone cutting undersized pulp or timber.

But not until last fall — with the Conference on Resources for Tomorrow, in Montreal — did urgent need force the whole nation to study the situation.

Despite the gravity and the urgency, however,

all that thc 700-odd delegates revealed in their week-long debate was what was already known: That the problems of conservation are so bound up in inter-governmental rivalry, local polities and outmoded laws that little short of national disaster ean shake them loose.

Hardly mentioned, because of the power farmers wield at the polls, was the crux of thc situation: That city-dwellers, who make up more than 75% of our population and are therefore the most affeeted by depletion of resources, should have far more say about what is done with those resources. Barely touehed was the implication that some form of over-all eontrol must be set up, that the traditional "fee simplc" systcm of land ownership — which gives owners power to do whatever they like with property — must give way to some measure of planning for its best use to the whole community.

Control of resources to benefit eity-dwellers would mean, for example, that Toronto's million-odd people would no longer have to drive hundreds of miles just to find a place to picnic. Large stretches of Lakc Ontario or Lake Simcoe shoreline, now barred by "Keep Off" signs, would be open to them. Vast areas north of Montreal, now closed to the publie by logging eontraets, would be thrown open for camping, hunting and other reereations. Farmers in Western Canada who in less than a century have caused duck populations to drop from 400 million to 30 million by draining watery nesting grounds would be eompensated for restoring these areas.

Areas around eities, now suffering what Dr. H. W. Keenleyside of Vaneouver ealls "Losangelization" — the violent spread of concrete where green fields onee lay — would be zoned, the poor land being set aside for industry, the good land kept for cultivation. Farmers who actually farmed would pay low taxes while those who sold out to land speculators would pay high ones — perhaps retroactively.

"This plan would be a shock to many landholders," says one conservationist, "but the start of a new life for city people."

Chief concern is over what are called "renewable resources" sueh as forests, water and soil. Most authorities agree that good forest management is the start of all eonservation. If you have woods in the right places, rain and snow are held for gradual run-off instead of causing floods, and enough water seeps deep into the ground to keep springs and wells bubbling. In Forest, Ont., wells drilled a century ago hit water 16 feet below the surface. With most of the surrounding bush removed, water levels are 150 feet below surface. Winnipeg, once well supplied with water near at hand, now has to pipe it in almost 100 miles.

Forestry experts agree that in cultivated areas some 20% of land should be left in trees. Most European nations observe this law to the letter. Germany keeps 27% of its farm regions in trees. Holland plants this proportion in ground wrested at great cost from the sea; Scotland insists that for every tree eut down, *two* more be planted. Yet in many parts of the St. Lawrenee lowlands, where some 60% of Canadians live, tree-land eomprises less than 5% of the total.

Ineredible as it may sound, however, Canadian farmers are encouraged by our income tax laws to cut down their whole woodlots at one time, rather than harvest them as annual crops. This stems from the law that a woodlot sold *en bloc* is a tax-free eapital gain, whereas selective cutting is classed as ineome, subject to taxation.

"We're studying this situation now," says Dr. D. W. Wilson, economist with thc federal department of forestry. "It does seem contrary to all conservation aims."

But farm woodlots are only a small part of the story. Over 80% of Canada's forests — which provide three out of every 10 Canadians with work — are provincially owned and rented to private firms, usually on 99-year leases (only Quebec limits leases to one year). Rules stipulate that firms shall keep crown lands "produetive", which is translated by a few to mean planting new trees but by most to mean letting natural re-growth take its easy course. So eager are most provinces for the taxes and jobs provided by pulp and timber companies, however, that they would rather see them mismanaging the land than not have them there at all. After all, the havoc thus created might not show up for years, by which time present leaders might be dead, or out of politics altogether. "Let the future take eare of itself" is the typieal motto.

There are other eonsiderations, of course. If firms do clear away the debris (amounting at times up to 50% of each tree in roots, braneches top and stump) and plant new trees, who pays? If these costs are added to the product, prices may soar in comparison to those of firms which *don't* praetice conservation. If all must do it, what about their higher prices on world markets? Should the government subsidize this work?

Whoever does it, it should be done soon. J. R. Booth, a lumber baron who died in 1919, ruthlessly slashed thousands of acres, practically exterminated the beautiful white pine in what is now Algonquin Park, brooked no opposition from any government. Now his own mills — incorporated in E. B. Eddy Company, of Hull, Quebec — must go hundreds of miles for inferior wood.

"It is to the interest of every Canadian to insist on good forest management," says H. W. Beall, director of administration of the newly created federal forestry department. "Otherwise, we could lose out in world markets. The biggest plywood plant in the world is no longer in Canada, but in Kenya. This could be the sombre shape of things to come."

Although forests or turf govern the speed of run-off and maintain supplies of water, the actual quantity available depends largely on the number of people and industries adjacent to water sources. The average city-dweller's needs are fairly modest — about 50 to 60 gallons per day. But the amount used by industry is fantastic. A large paper mill will use up to 50 million gallons per day. To produce a ton of steel requires 65,000 gallons. A ton of rubber requires 85,000 gallons.

Just using the water would be fine if it weren't that water which has passed through a factory or home is seldom as pure as when it entered. Impurities funneling into the North Saskatchewan River from petroleum plants below Edmonton are so virulent that they make the water unfit to drink even 300 miles downstream at Prince Albert, Sask. Phosphates in household detergents are believed responsible for the thick, algae-type scums which have recently appeared on rivers from Chilliwack to the Memramcook valley. Waste from the miles of factories — and ships on the Seaway — make Montreal's waterfront deadly to swimmers.

Water doesn't have to look murky and dark to be lethal. A company president taking visitors around his plant in New Westminster, B. C. this spring, was asked if the water from the mill was polluting the nearby Fraser river. For answer, the president borrowed a cup off a lunching workman and drank some of the clear water running out of plant drain. The visitors were impressed. That evening the president was violently ill.

Many of these impurities can be counteracted by filter plants, but others — particularly the phenolic compounds flowing from petroleum plants are untouched, require massive chlorine just to neutralize effects. It is probably no coincidence that in Moose Jaw, Sask., site of a huge petroleum cracking plant, the water is so heavily chlorinated that casual visitors can barely drink it.

Biggest offenders in the pollution of Canadian streams and also lakes, however, are the municipalities themselves, most of which dump raw sewage into whatever watercourse is nearest, destroying fish and creating foul odors. Though federal aid is available to any city or town, wishing to build a sewage disposal plant, only one Canadian city in every six has adequate facilities. Even Ottawa itself has no sewage processing plant.

This fouling of their own doorsteps is a national tragedy, and is inexcusable since the remedies are known. A good sewage disposal plant not only purifies water but often produces almost enough much-needed fertilizer to offset costs of operation. "Any plan aimed at protecting future water supplies," said the authoritative *Bulletin of Civil Administration* last October, "must include an effective natural plan of pollution control and abatement."

One of the biggest dilemmas, however, is where water conservation conflicts with employment. Salmon, for example, can still make their way up the Fraser, but many believe if plans go ahead for bigger power plants on the river the salmon are doomed. Across the country, log drives on the St. John river, N. B., make navigation virtually impossible. In such disputes, who wins out?

Decisions, though supposedly impartial, usually go to whoever has the most money. In January, 1948, five citizens owning property on the Spanish river, 75 miles west of Sudbury, sued the Kalamazoo Vegetable and Parchment Company of Espanola for polluting the river, and won. KVP took the case right up to the Privy Council in London, and lost each time. They then went to Premier Leslie Frost, of Ontario, who in 1950 passed a special law called "The KVP act" nullifying all court decisions and permitting KVP to do whatever it liked. To save future embarrassment to similar firms, he also amended the Lakes and Rivers act to provide that in such cases, plaintiffs might collect damages but cannot get injunctions against polluters.

"In most other provinces, the result would probably be the same," says Gavin Henderson, head of the Conservation Council of Ontario. "The despoiling of our waterways will continue."

Soil, the third great renewable resource, has probably been the most neglected. Southern Al-

berta is an example of how *not* to use land. When settlers first arrived there the sod was so thick that "sod shanties" made of untreated turf were the common type of dwelling. Yet between 1905 and 1915, their methods of plowing — combined with strong winds which swept away loose soil — transformed the region into a desert. Similarly, the dreadful duststorms of the 1930's lifted the plow—pulverized topsoil of Southern Saskatchewan and deposited it as far away as New York. Today, machines like the combine tiller and improved methods like stripfarming — planting alternate fields at right angles to each other — have halted the pillage. But they do little to refertilize the soil itself. It has been estimated that the amount of plant nutrients Canada exports as grain each year is greater than the total amount applied as fertilizer.

In other words, each grain crop mines the soil that much further.

By contrast, Britain took such loving care of its soil through centuries of crop rotation that even five years of forced mining of the soil during World War II did not appreciably harm it. Britons have long known the value of contour plowing. Even the ancient Incas and the Chinese knew it. Yet in Canada we still give prizes for men who can plow the *straightest* furrows — the surest known system of funnelling vitally needed water off fields in the shortest time.

Of all Canadian cities, only a handful have made any real efforts to halt the gobbling up of every scrap of greenery in sight. Most have been more eager to obtain the taxes of industry now than worry about what citizens will do for recreation at some dim future date. This instinct for annihilation shows up worst in Southern Ontario, the most densely populated part of Canada. In the 65-odd miles of lake-front from Oshawa to Hamilton there is scarcely an acre left for parkland.

In 1957 the town of Ajax, near Toronto, tried to set aside a 400-foot strip of Lake Ontario frontage as a park. While plans were being drawn up, a development company bought up 2,000 acres of this land, testified before the government that a chemical plant was slated for the beach area and won the case against Ajax. The firm's most telling argument: They needed the beach as a site for a big sign advertising the plant's products to passing ships.

Even the famed Niagara Fruit Belt — best peach-growing area in North America—is doomed, despite an expert survey report that "we can both retain the area for its special fruit growing purpose and have the inevitable and important urban expansion." But unless some authority steps in *now*, the whole fruit tree area will be under concrete in less than five years.

Of the other urban areas, only Vancouver and Montreal have made strenuous efforts to maintain the mountain greenery in their midst. Saskatoon and Edmonton have limited plans for use of perimeter properties. But only one city, Ottawa, has made really detailed plans for the future.

Since 1950, the National Capital Commission has purchased 7,600 acres of urban Ottawa at going rates "in anticipation of need," now owns all but a mile or so of the 38 miles of Ottawa and Rideau River frontages in the city. In addition, it has purchased 68,000 acres of Gatineau Park across the river in Quebec, plans to let it return to total wilderness. Its famed "Green Belt," an urban-rural zone up to three miles wide running for 16 miles around the city, is now reserved for such low-key purposes as beaches, golf courses and research institutes. Airports are also located in this belt, so that planes will not have to fly over congested areas.

Whether any other Canadian city could afford to do as Ottawa has done is doubtful, since it involves great capital outlay. "Our funds come from general taxation," admits Peter Ayckroyd, NCC engineer, "and the $27 million we've spent so far to build a capital every Canadian can be proud of represents only a few cents added to his yearly taxes."

But what other cities *could* do, he feels, is to zone their districts so that good farm or park land would not be lost to industry, and also to ensure that industrial plants would not find houses going up on their doorsteps. They could also buy up river or lake frontages whenever it becomes available. In this way, even if cities resemble conservationists' nightmares, there may still be pockets of greenery left to succour men's spirits.

But as for conservation on a national scale, all authorities agree this will require a much greater desire for cooperation among local, provincial and federal governments than has ever been exhibited to date. Without it Canada will be, as historian Goldwin Smith observed in 1880, "a land rich by nature but poor by policy."

by Bill Stephenson
Montreal Star Weekly Magazine,
June 30, 1962

Mechanical Raisin Harvester Proves Efficiency in Field

A machine that could revolutionize the California raisin industry was demonstrated recently at the DiGiorgio Farms in Kern County, near Bakersfield. It will mechanize the tedious and delicate business of raisin picking.

The project was a joint effort by the California Raisin Advisory Board and the University of California. The board provided the incentive and a large proportion of the funds needed, while scientists from U. C.'s Department of Agricultural Engineering spent seven years perfecting the machine, under the leadership of Associate Professor Lloyd Lamouria.

The main problem faced was a cultural one. Normally trellised, grapes grow in positions all over the vine, inaccessible to any machine. So the University's Department of Viticulture designed a new trellis, the "inverted L". On this, the vines grow on top of five parallel wires, with the bunches beneath them in a neat row where they can be cut down easily.

The machine itself can be self-propelling, although the demonstration prototype was towed by a tractor. It is approximately nine feet square, has a 28 h.p. engine and runs on three fat low-pressure tires designed to give good traction on the sandy soil.

One man sits low down at the back of the machine, riding below the overhanging vines and talking to the tractor driver by intercom. He is responsible for steering the machine and for manipulating the cutter bar. This is a unique invention with double reciprocating blades; it follows automatically the line of the wires, and can be lowered or turned by the operator if he sees an obstruction in its path.

Two huge air-pipes below the cutter blow leaves and trash out of its way, and a 70-pound roller moving above the vine pushes the bunches into the best position.

Once cut, the bunches move along a conveyor belt and are deposited gently on a strip of brown paper that unrolls from the machine. There they lie from two to four weeks, drying in the sun.

Raisin grapes have to be picked with particular care, since one spoiled fruit can ruin those drying near it. According to Lamouria "If anything, this harvester picks the grapes more gently than hand laborers can. It also spreads out the bunches to dry remarkably evenly."

Some hand labor is still required to remove any crushed fruit from the drying rows, and to pick any bunches that have been hanging too close to the trellis supports to be reached by the machine. But on experimental plots at Davis and in Kern County, the machine has proved itself to be 90% efficient, doing the work of between 40 and 70 men.

The California Raisin Advisory Board expects the harvester to be gradually accepted by growers as it proves its worth, although it will require a sizeable initial investment of labor in re-trellising the vineyards — a job that takes one winter season. Once re-trellising is completed, workers will have to visit each vine twice in the early summer months to moke sure that the bunches are growing in the right places, and that no canes are bagging into the cutting zone.

Plans will shortly be released to manufacturers who will make the harvester at a price of approximately $7500. Although it was developed principally to harvest raisins grown in the San Joaquin Valley, it can also be adapted for harvesting wine and table grapes.

—California Farmer, October 20, 1962

Oil Pipeline Mileage

Washington (AP) — Pipelines for transporting crude oil and refined products stretched for 200,543 miles in this country on Jan. 1 the Bureau of Mines reported. . . .

. . . Total pipeline fill — the amount of crude oil or refined products required to keep the lines full — was 86,176,000 barrels on Jan. 1, an increase of 3,963,000 over the 1959 requirement.

—Los Angeles Times, Aug. 19

LAND OF OPPORTUNITY

When all else fails, we, as Americans, have one fact on which to fall back. America is the land of opportunity. Who can deny that after the sagas of Abe Lincoln and Scarface Al Capone? They were faced with grave obstacles, yet they reached the top of their respective fields.

This male version of the Cinderella story is well known to everyone. Maybe you weren't born into the conditions that make for comfortable living, but ,if you work hard, and never give up, you have a chance to obtain all these things; for this is America, the Land of Opportunity. The story is so well told that one almost believes men succeed because of their early environment, not in spite of it. You too can be rich; and if you fail it is strictly your own fault. So stare in awe at the 'self-made' success, but don't forget to look at all the facts.

Many people do not have the intelligence and initiative to climb the rungs of the ladder of success. They lack the peck rights and the ability to develop them. This is true in every society. Under the Price System it is impossible for everyone to have everything he needs. To accomplish this, every citizen who had a family to support would have to be provided with a job and decent pay. With the trend toward installing more and more machinery in our factories, and using fewer and fewer man-hours, to supply everyone with a job would mean short working hours and high pay. Manufacturers and businessmen would be forced to pay three men a total of three men's wages to do one man's job. And they couldn't raise prices. It doesn't take the training of a Certified Public Accountant to see what would happen; business would hit a greased chute, and that would be the beginning of the end.

Yes, in America, the land of opportunity, if you have high peck rights and practice the art of chiseling to the fullest extent, it is possible for you to earn a decent living. But what about the majority of Americans who can't make the grade? They are fed words to make them content. They are assured that they were born 'free and equal.' They are reminded that they have freedom of speech, press and religion.' It is pointed out to them that they live in the country with the highest standard of living in the world. They are fed pathetic stories about the conditions in the rest of the world and then told to be thankful for what they have. And, most of all, they are assured that they, too, have the golden opportunity.

Strangely enough, the last statement is true. They do have opportunity. The opportunity to live in the greatest era ever known to man. The opportunity to enjoy an abundance, to be freed from time-consuming toil, to live life to the fullest. With technology coming into its own, all these are possible.

This information is never given to the American by his government, 'Government of the people, by the people and for the people,' nor by any other institution of the Price System.

Technocracy, being diametrically opposed to the Price System, offers this information to the American people. Technocracy has the plans and the blueprints for this new America, the America of abundance. We, as Technocrats, realize that we have a job to do, a job of gigantic proportions — to present this information to more and more Americans. We know that the Price System is in its death convulsions. It is no longer a matter of opening the eyes of the American people to the abundance that COULD be theirs. Now more than ever, America is the land of opportunity — with this difference: where before there were many opportunities, there are now only two, the opportunity to find out what an abundance and an abundant life are, or the opportunity to experience chaos! Technocrats have chosen the one they want. Now all Americans must choose.

Technocrats are offered the most glorious opportunity of all: that of leading their fellow Americans into a new day, into a life of abundance.

—Fred T. Botts, 12247-3

encouraged the entreprenuers to adopt ever newer and faster means of production, and as long as the market absorbed the product everything seemed in perfect accord.

Now in the year 1962 it is apparent that the process has caught up with us. In fact, for the last three decades it has been increasingly apparent that we produce more than we can profitably distribute. Science and technology have devised means for the production of goods and services without the use of the 1/10 horsepower furnished by man.

Here in this very fact lies the greatest social change that has ever occurred to man. All the ideas conceived when there was scarcity and hand tools are now just so much useless debris to be discarded. Our problem is to recognize and accept the change and adjust our institutions to conform to the new environment. Human toil for long hours is passe. Food, clothing and shelter are the right of all citizens. Security of income, education to the limit of the individual capacity, health care from birth to death — all these and many more become the minimum rights for a citizen of the first continent on earth to reach the goal of the abundant life.

This is yours if you will work for it. We go on from here under a new set of rules, or we go to oblivion.

—L. M. Proctor

Bumper crops in foreign countries shrink U. S. wheat exports. Wheat production in Europe runs sharply higher than in 1961. France is expected to harvest about 421 million bushels, up about 80 million from the year before. Canada, a major competitor in the world wheat market, probably will reap 531 million, about double the poor 1961 harvest. India, Spain and Portugal have better crops, too.

COVER

Out of Allis-Chalmers engineering facilities has came the "Spaak," the warld's first radia-cantralled crawler tractar shavel. The huge 82,900-paund tractar shavel perfarms fram signals transmitted fram a remate cantral panel strapped ta the aperatar. Although it will have its first cammercial applicatian in steel mill slag remaval aperatians, Allis-Chalmers says it has uses in military and civil defense applicatians, mining, and ather areas where danger ta an aperatar an a tractar is apparent.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 2800.

Marjorie T. Clouse

(Signature of Business Manager)

Sworn to and subscribed before me this 1st day of October, 1962.

Agnes L. Hart

Notary Public in and for said County

(SEAL)

(My commission expires July 22, 1966)

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TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or associaton either in North America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are $9.00 which are paid by the member to his local Section. Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers, and economists that became known in 1920 as the Technical Alliance — a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every State and in every province in Canada, and in addition there are members in Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHO?

Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to North American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher, or housewife — so long as you are a patriotic North American — you are welcome in Technocracy.

The TECHNOCRAT

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—Webster's Third New International Dictionary

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